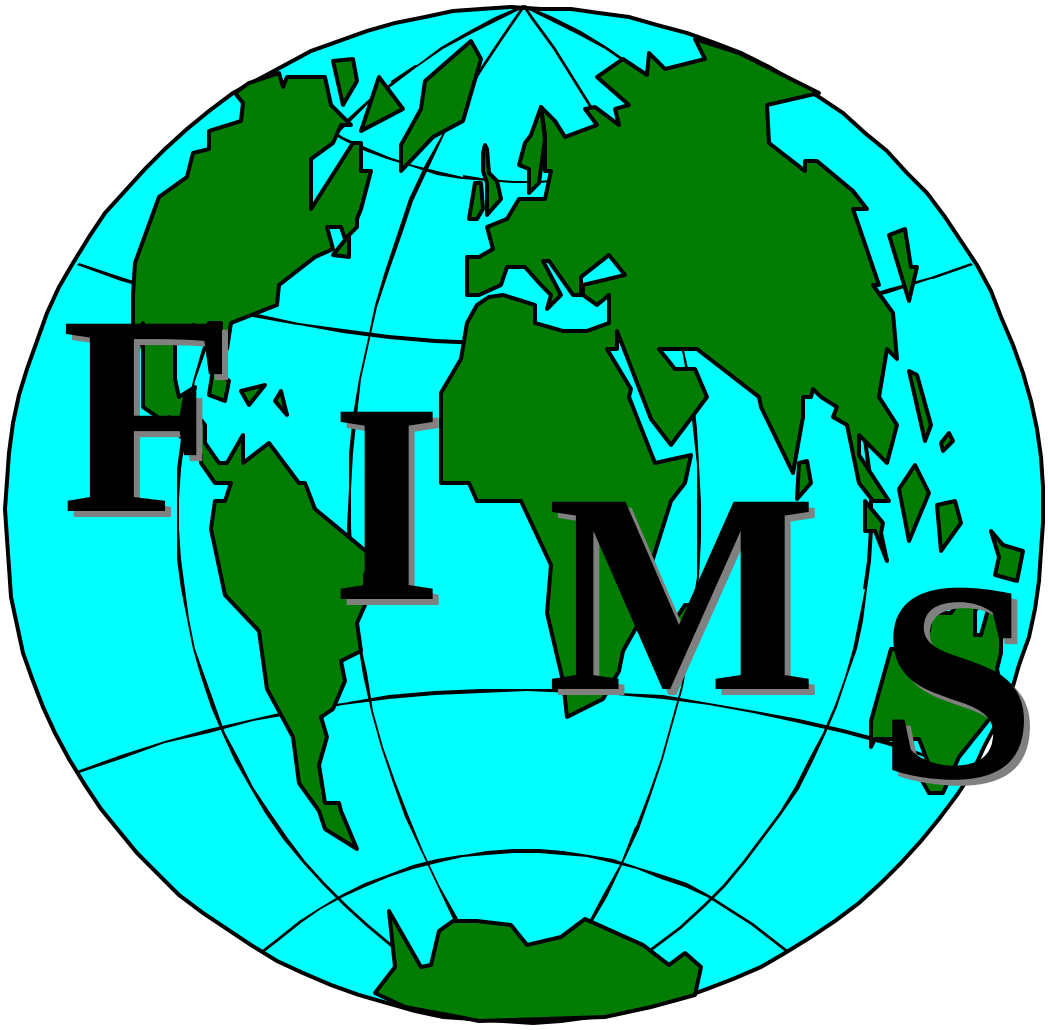
Facilities Information Management System (FIMS)

Training Manual



September 2004

Table of Contents

THIS PAGE INTENTIONALLY LEFT BLANK.

1. FIMS Overview

In this section, this manual will define the history and purpose of the Facilities Information Management System (FIMS) as well as the platform the system resides on. You will also be provided DOE field office points of contact for FIMS. The last section will outline the course objectives for this two-day training class.

Purpose

The Facilities Information Management System (FIMS) is the "corporate" real property database for the Department of Energy. The system is managed at Headquarters by the Office of Management, Budget and Evaluation (ME-90). FIMS provides an automated mechanism that allows users to manage all real property including land and its natural resources, any man-made alterations and additions - Buildings, Trailer/Modulars, permanent fixtures, and equipment. It was designed to provide management with an accurate tool that can be used for planning by Headquarters and all DOE field offices, respond to both internal and external inquiries, provide easy to access up-to-date information, and automate the preparation of electronic reports for the General Services Administration (GSA), Federal Emergency Management Agency (FEMA), and Congress.

History

In 1983, DOE developed the first real property system called RPIS. RPIS was a System 2000 data base batch application with overnight processing. In 1988, DOE purchased from GSA a system called Foundation In Real Property Management (FIRM). FIRM was modified to meet specific DOE reporting needs and became RPIS2 in August 1989. RPIS2 was an ORACLE based system with real-time updating and reporting capabilities. Both RPIS and RPIS2 resided on the DOE mainframe.

In June of 1992 an effort began to develop a "corporate" database that would consolidate common data elements from real property systems utilized by DP, EH, EM, SC, and FI. This database became known as the Facilities Information Management System (FIMS). Data from RPIS2 was migrated to FIMS. FIMS became fully operational on July 10, 1995. In the summer of 2004, FIMS was migrated to a web based application with increased capabilities.

System Requirements

FIMS is a web based application that utilizes an ORACLE9i relational data base management system running on a Sun Solaris file server. System requirements for access are as follows:

- Microsoft Internet Explorer 5.0 or greater
    - Make sure the settings for Temporary Internet files is set to 'Automatically'. To verify this from Internet Explorer, click on the Tools menu, then Internet Options, and Settings under Temporary Internet files
- Adobe Acrobat Reader 6.0
- Screen Resolution of 1024 x 768
- Text size from Internet Explorer browser should be set to medium or small

Getting Started with FIMS

It is very important before you begin work with FIMS that you identify the individuals that you may contact to obtain data for input into FIMS. Depending on your site, your contact could be the Accounting dept, Area office, ES&H Manager, Facilities Manager, GSA Regional Office, Maintenance Manager, Plant Engineering, Procurement, Real Estate representative, Seismic Engineer, Headquarters point of contact for specifically sponsored data elements, or your FIMS Field Office System Administrator. It is possible that your site may have contacts other than those listed above. Provided below are the DOE FIMS Field Office System Administrators. Other contacts may be located on the FIMS web site at http://fims.hr.doe.gov.

OFFICE	NAME	PHONE	EMAIL
Albuquerque Operations Office (NNSA Service Center)	Bill Montana (DOE)	(702) 295-1899	montana@nv.doe.gov
Chicago Operations Office	Gloria Baldwin (DOE)	(630) 252-2147	Gloria.Baldwin@ch.doe.gov
Golden Field Office	Matt Graham (DOE) Lisa Morse	(303) 275-4766 (303) 275-4638	Matt_graham@nrel.gov Lisa_morse@nrel.gov
Idaho Operations Office	Dan Shirley (DOE)	(208) 526-9905	shirleydb@inel.gov
Naval Petroleum Reserves	Elaine Badger	(307) 261-5161	
National Energy Technology Lab	Rick Price (DOE)	(412) 386-6196	Rick.price@fetc.doe.gov
Nevada Operations Office	Bill Montana (DOE) Mike Horn	(702) 295-1899 (702) 295-0621	montana@nv.doe.gov hornlm@nv.doe.gov
Oak Ridge Operations Office	Tracye Baber (DOE)	(865) 241-5627	babertm@oro.doe.gov
Oakland Operations Office	Ron Howard (DOE)	(510) 637-1705	Ronald.howard@oak.doe.gov
Ohio Field Office	Debbie Hoover (DOE)	(937) 865-3499	Debbie.hoover@ohio.doe.gov
Pittsburgh Naval Reactors Office	Tim Glock (DOE) Scott Grahn	(412) 476-7230 (412) 476-6339	glockt@bettis.gov
Repository Development	James Schmitt (DOE)	(702) 794-5094	James_Schmitt@ymp.gov
Richland Operations Office	Steve Burnum (DOE)	(509) 376-8409	Steven_t_burnum@rl.gov

Rocky Flats Office	Ron Kershner (DOE)	(303) 966-6754	Ron.kershner@rf.doe.gov
Savannah River Operations Office	Ronald Jernigan (DOE)	(803) 725-2685	Ronald.Jernigan@srs.gov
Schenectady Naval Reactors Office	Cal Bowie (DOE)	(518) 395-6373	bowie@kapl.gov
South Western Power Administration	Linda Mummey (DOE)	(918) 595-6664	Linda.mummey@swpa.gov
Strategic Petroleum Reserve Office	Jerome Williams (DOE)	(504) 734-4347	Jerome.Williams@spr.doe.gov
Western Area Power Administration	Nona Rivera (DOE)	(720) 962-7276	rivera@wapa.gov

Who's Who in FIMS

Facilities Data Development Committee (FDDC)

This is the corporate governing board that is comprised of individuals who represent a program secretarial office that funded the development of FIMS. This corporate board provides the guidance and direction of FIMS by making all final decisions regarding system policy and enhancements. The FDDC has representation for the following Headquarters program offices: Energy Efficiency and Renewable Energy (EE); Environmental Management (EM); Management, Budget and Evaluation (ME); National Nuclear Security Administration (NNSA), and Science (SC).

FIMS Advisory Committee (FAC)

This is a subcommittee of individuals comprised of Field Office users, including contractor personnel, that recommend continuous improvement to the system. FAC recommendations are presented to the FDDC for final approval/disapproval.

Course Objectives

At the end of this course, you should be able to perform the following:

- Introduce participants to the capabilities of FIMS.
- Discuss how FIMS serves as the Departments Corporate database.
- Review of FIMS related guidance from Headquarters.
- Learn to navigate efficiently through the system.
- Add real property information.
- Review of FIMS data elements and requirements.
- Review of all of the latest enhancements.
- Review FIMS archive capabilities and discuss the banking concept for square footage.
- Replacement Plant Value calculations.
- Develop basic queries using FIMS expression builder.
- Create custom queries and reports using Microsoft Access 2000

2. Introduction to FIMS

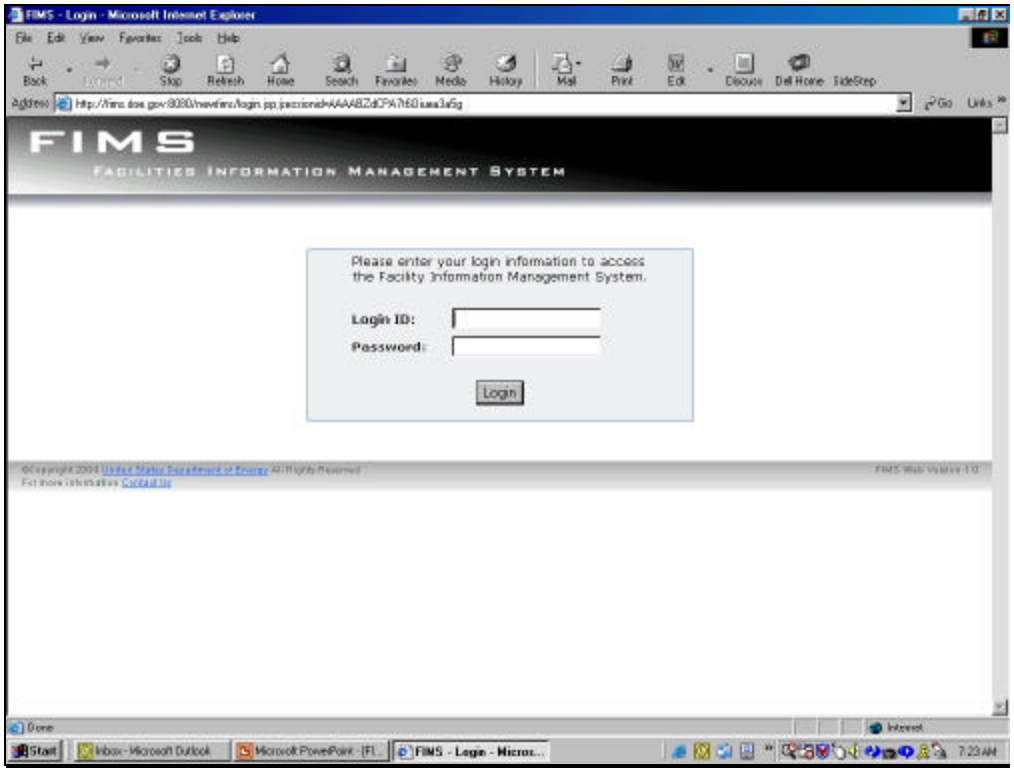
In this section, this manual describes the procedures for logging into FIMS and a review of the FIMS web window.

FIMS Login

You may log into FIMS by opening your Internet Explorer browser and type in the following URL address:

https://fims.doe.gov

Once you input the URL address, the following screen will appear.



Each FIMS user will be given a userid and password from their Field Office System Administrator or the Headquarters support staff. The initial password should be changed immediately to protect the system from illegal access. The

password is valid for 6 months and must be changed by the user. It must not contain a slash (/), dollar sign ($), or ampersand (&).

A security level is assigned to each userid. All users, regardless of security level, will have read-only access to all FIMS information. Add, Update, and Delete access to FIMS information is controlled by security levels as follows:

FIMS Security Level	Authorities
FIMS System Administrator	• Add, Update, and Delete access to all records. • The authority to establish security records for all other FIMS users.
Field Office System Administrator	• Update only for Sites and Areas within the Field Office. • Add, Update, and Delete access to all Properties within the Field Office. • Authority to establish security records for FIMS users within the Field Office.
Field Office User	• Update only for Sites and Areas within the Field Office. • Add, Update, and Delete access to all Properties within the Field Office.
Site User	• Update only for Site and Area records within the Site. • Add, Update, and Delete access to all Properties within the Site.
Guest	• Read-only access only.

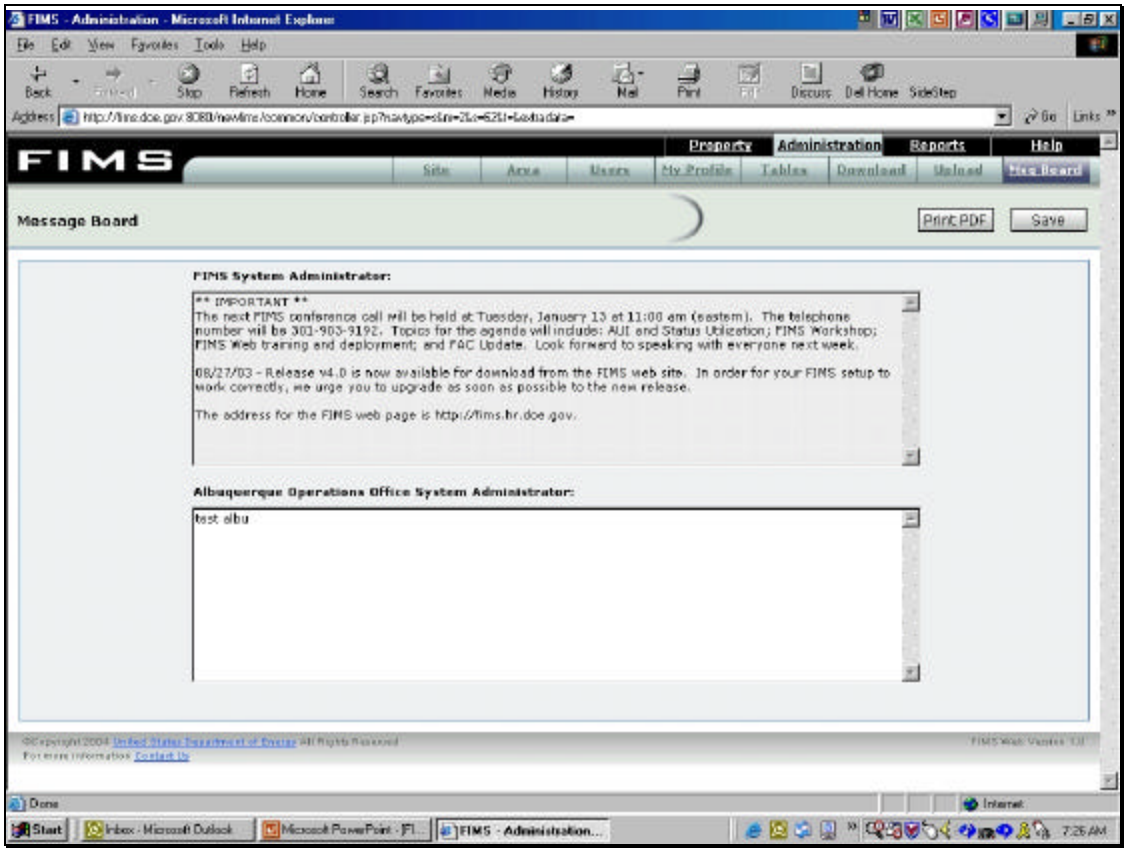
Viewing the Message Board

When you have successfully logged into the system, the FIMS Message Board appears. The Message Board is used by the Headquarters System Administrator and the Field Office System Administrators to relay important and time-sensitive information to all FIMS users.

The upper portion of the Message Board contains information from the Headquarters System Administrator. All users can view this information. The lower portion of the Message Board contains information from your Field Office System Administrator. Users view this information for their field office only. Other field office users will not see information from your Field Office System Administrator.

If you wish to print the contents of the Message Board, **click** on the **Print PDF** button.

It is very important that all users accustom themselves to reviewing this board frequently.



Exercise 1: Logging into FIMS

1. Logon to FIMS

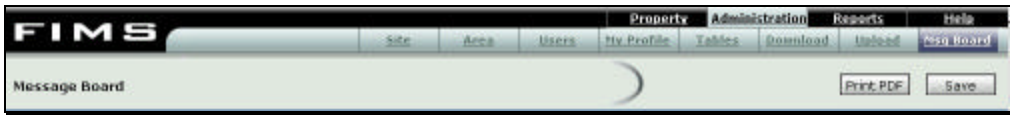
   Dbl-Click: **Internet Explorer icon**.
   Type URL: **http://fims.doe.gov:8080**
   Type userid: **train#**
   Press: **[Tab]**
   Type password: **fimsweb#**
   Click: on **Login button**

2. View the DOE Message Board

FIMS Web Layout

Once you have reviewed the Message Board, you are at the starting point for entering or querying real property information. The FIMS web layout consists of a Heading, Sub-Heading, Current Location, Links, Command Buttons, Main Window, and Footer.

Headings and Command Buttons



The heading menu bar provides you with four selections: **Property**, **Administration**, **Reports**, and **Help**. By default, when you log into FIMS, you are on the Administration selection. Each heading selection provides sub-heading options. Those options are defined below.

- **Property**: Clicking on Property provides you with the option to access Building, Other Structures and Facilities (OSF), Land, and Trailer real property information.
- **Administration**: Clicking on Administration provides you with the option to access Site level data, Area level data, FIMS Users list, My Profile personal settings, Lookup table access, Download capability, Upload processing, and the Message Board.
- **Reports**: Clicking on Reports provides you with access to all of the FIMS standard reports. The standard report categories are: Buildings, Land, OSF's, Trailers, Maintenance, Special, and Archive. In addition, there is an Ad-hoc option that will allow the user to create custom queries from the FIMS information.
- **Help**: Clicking on Help provides you with online access to the FIMS User's Guide. This document is also available for download from the FIMS web site (http://fims.hr.doe.gov).

Current Location and Command Buttons

Below the heading and subheading menus are command buttons to the right and the current location and links will always be provided on the left. The command buttons will frequently change based on your security level and the area of the system that you are currently reviewing. Based on your security level, there will be times where there will be no command buttons present at all depending on your current location in the system. An example of this would be if a guest user was reviewing data for a particular site. In this instance, the Save and Delete Property buttons would be hidden because the users security level is read-only access.

Main Window

The main window will always be located in the middle of your Internet Explorer browser window. This will basically be your workspace for processing

information and generating reports within FIMS. The display of the main window will constantly be changing based on the work you are conducting within FIMS.

Links

On the left hand side of the FIMS web layout, will be a series of links when you are accessing real property information. These links will change based on property ownership and property type. If a link does not apply for a particular asset, FIMS will simply make that link invisible to the user. In the example above, the current location has been identified as the Property Info link. All of the available links are provided below. The user can simply click on the other links to review the information that pertains to that link.

Footer

The footer provides a link to the Department of Energy web site. You can also click on the Contact Us link, which provides you with Headquarters Support contacts as well as the phone number for the FIMS Hotline. To the far right, the footer displays the current version number of the FIMS web application.

3. Real Property Entry

In this section, this manual will define the FIMS system structure of how data is organized within the database. You will also learn the concepts, procedures, and controls for expediting the data entry process.

System Structure

Although FIMS is a relational database, it is helpful for users to think of the system in a hierarchical organization.

FIELD OFFICE Designates the DOE Operations or Field Office.

SITE A Site is a geographic contiguous body of land associated with a DOE Field Office. In most cases, there will be multiple Sites defined within a specific Field Office.

AREA An Area is an administrative subdivision of a Site. There may be multiple Areas defined within a Site.

PROPERTIES FIMS contains real property data in the form of Buildings, Land, Trailer/Modulars, and Other Structures and Facilities.

Ownership Designation

The data entry process is driven by the ownership designation of each asset. This is accomplished by the Owned/Ingrant field within FIMS. Provided below are the various Owned/Ingrant designations that are used within FIMS.

- **DOE Owned** – Real Property acquired by DOE either by purchase or withdrawal from the public domain.
- **DOE Leased** – A possessory interest in real property that DOE acquired from the owner of the property.
- **DOE Ingrant** – A right acquired by DOE or its contractors for the use of real property of other means such as a lease, license, easement, permit, right-of-entry, or interagency agreement.

- **Contractor Leased** – A possessory interest in real property that a contractor acquired from the owner of the property and DOE reimburses the contractor for the rent paid to the owner.
- **Contractor License** – A nonexclusive interest in real property that a contractor acquires from the owner of the property and DOE reimburses the contractor for the fee paid to the owner.
- **Institutional Control** – Include administrative or legal controls (e.g. easements or use restrictions), physical barriers or markers, and other methods to preserve information and data to inform current and future generations of hazards and risks.
- **Permit** – A temporary right of exclusive or nonexclusive use of real property. It is generally applicable to granting another federal agency the right to use DOE real property or vice versa.
- **GSA Owned** – Real Property acquired by GSA either by purchase or withdrawal from the public domain.
- **GSA Leased** – A possessory interest in real property that GSA acquires from the owner of the property. Most GSA leased space in buildings and associated land is then assigned to other executive agencies under the assignment authority of GSA.

Entry Concepts

To access the real property information, the user should click on the Property heading and then select Building, Land, Trailer, or Other Structures and Facilities from the sub-heading menu. Depending on the property type that was selected, the data requirements and available links will vary based on the following ownership designations of the Owned/Ingrant Indicator:

Buildings

- DOE Owned
- DOE Leased
- Contractor Leased
- GSA Owned
- GSA Leased
- Permit
- Contractor License

Other Structures and Facilities (OSF)

- DOE Owned
- DOE Leased
- Contractor Leased
- Permit
- Contractor License

Land

- DOE Owned
- Contractor Leased
- DOE Ingrant
- Institutional Control
- Contractor License

Trailers

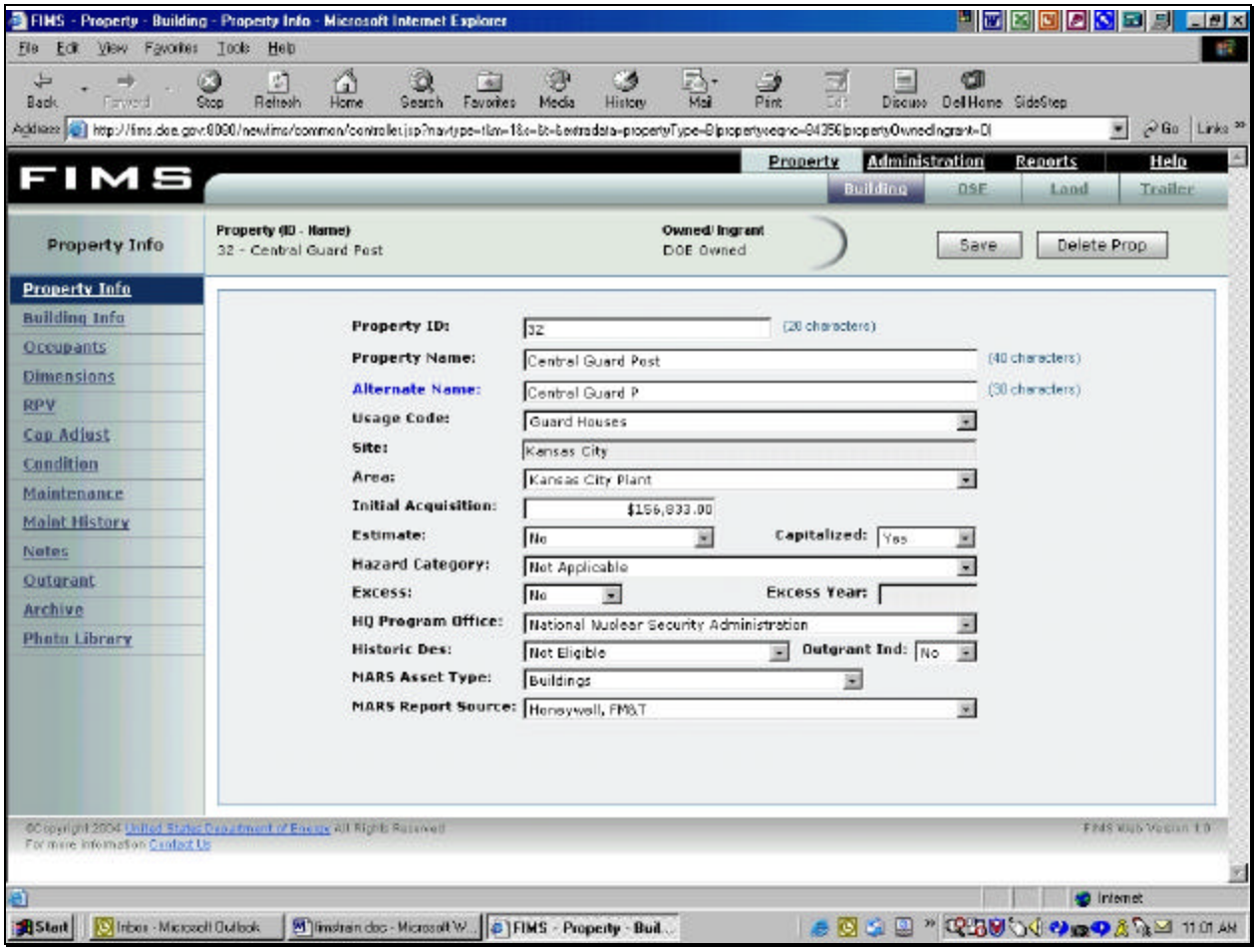
- DOE Owned
- DOE Leased
- Contractor Leased
- Contractor License

Once you click on a particular link, a series of command buttons may be available based on your security level within FIMS. These command buttons indicate the actions or commands you can activate.

Use this button	To
	Enter a new building record. This command button is accessible from the Building List Window.
	Save the data on the current window. Users should click on save when changing data before moving on to the next Link.
	Deletes the current property record on the main window. When a property record is deleted, data from all associated links is removed as well.
	Used to add a record on links that support multiple records. Examples would be Occupants, Capital Adjustments, and Outgrants.
	Will allow information to be archived prior to a record being deleted from the database.
	Allows standard reports to be generated in PDF, HTML, and Excel formats.

Data Entry Controls

FIMS employs a variety of mechanisms for displaying data and/or accepting and validating user responses. These mechanisms, called data entry controls, are designed to increase user understanding of data entry requirements and reduce data entry error.



Required vs. Optional fields

Black field labels indicate that data entry fields are required as opposed to blue label data entry fields which are optional. About 98% of the fields in FIMS are required fields. When as asset is added to FIMS, the system will invokes a wizard based approach to force the user to input a minimum number of data fields in order for the record to be saved to the database. The other required fields can be populated once the data is available.

Pick List

Provides a list of several options for you to choose from. In most cases, the choices come from a FIMS Lookup table. This type of data entry field can be easily identified by the down arrow located at the end of the field. Click on the down arrow to view the pick list and then click on your selection.

Radio Button

Used to turn mutually exclusive options on and off. Click on the selection of your choice. Automatically turns off previously selected option.

Edit Box

Allows entry of data into a field. Tab to or click on the box to enter data. To expedite the data entry process, you do not have to enter any special characters in the edit box field. FIMS will automatically insert them as you input data. For example, hyphens for zip codes or parenthesis for telephone numbers. Depending on the data field, enter free form text or data in one of the following formats.

Data	Data entered	Formatted Result
Zip Codes	208781114	20878-1114
Telephone Numbers	3019030836	(301) 903-0836
Currency or Numeric	1465000	$1,465,000

Copy Text

Highlight the desired text to be copied (by dragging the mouse). Press **[Ctrl+C]**.

Move the mouse pointer to the desired location. Press **[Ctrl+V]**.

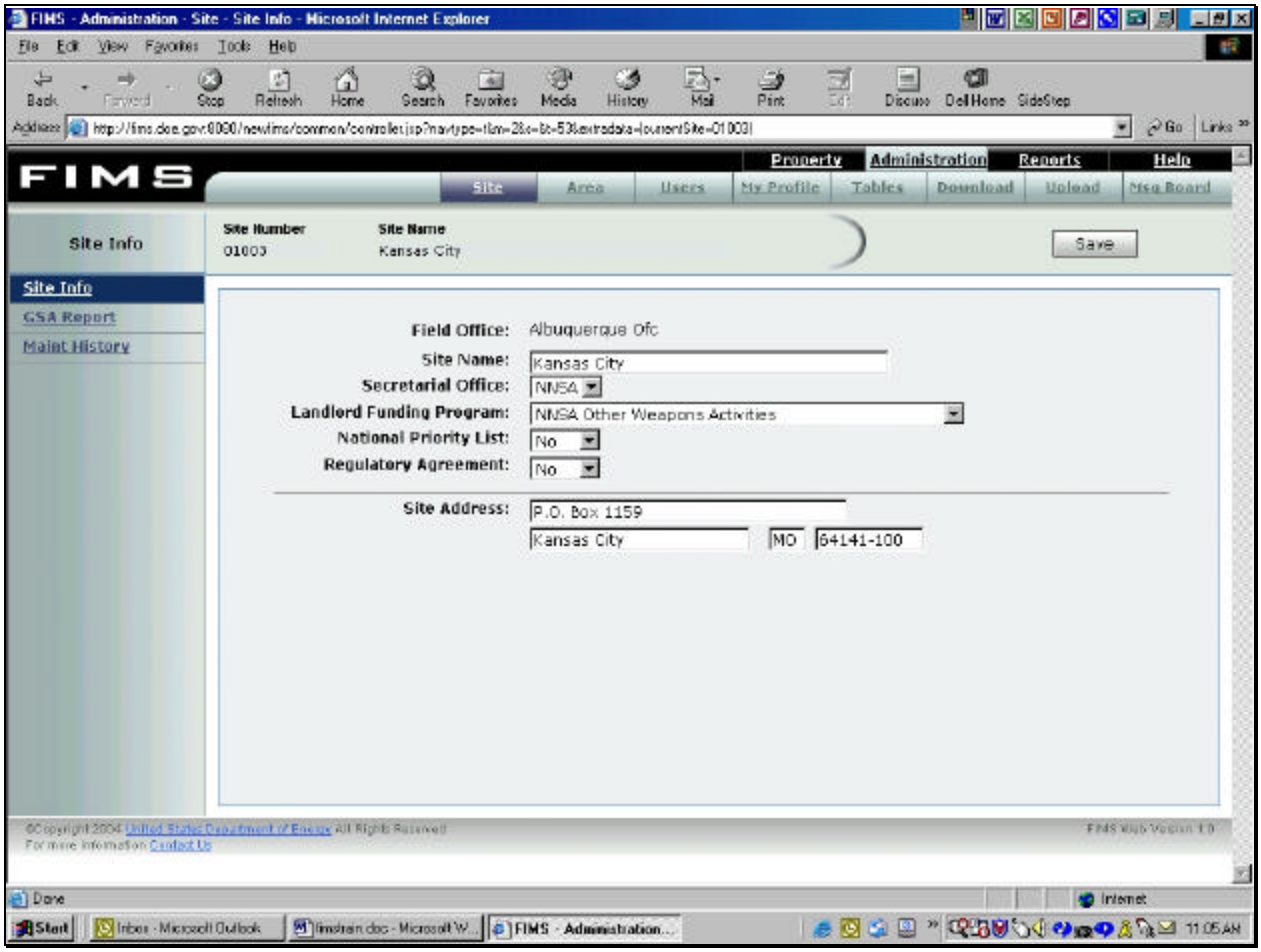
Delete Text

Highlight the desired text to be deleted (by dragging the mouse). Press **[Delete]** key.

4. Site/Area Update

In this section, this manual will define the data entry process for the Site and Area records. It should be noted that depending on your security level, some of the options displayed in this section may not be available to you. Only the Headquarters System Administrator can establish new Site records or remove existing Site records. Both Headquarters and Field Office System Administrators can establish new Area records.

Update Site



To access the Site Window, select Administration from the heading menu and then Site from the sub-heading option. The Site Name and Number are identified to the left of the command buttons. The first two characters of the Site Number represent the Field Office. The remaining three digits are a sequential identifier. Click on the links on the left to review other Site data.

Listed below are the links available from the Site window.

Site Info - Contains general DOE Site information.

- Site Name
- Site Number
- Area Office
- Secretarial Office
- Landlord Funding Program
- National Priority List
- Regulatory Agreement
- Site Address
- Site City
- Site State
- Site Zip Code

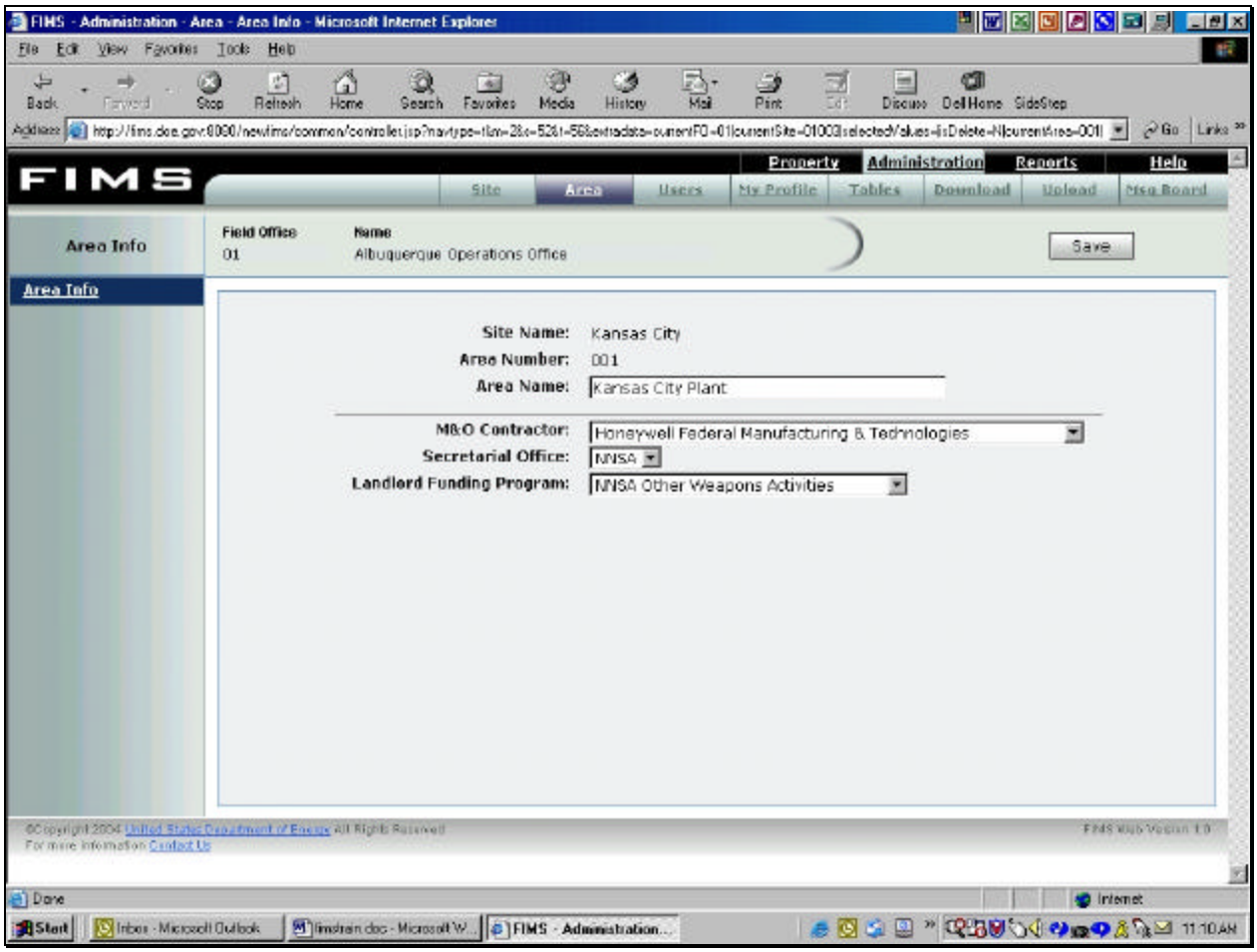
GSA Report - Contains information required for the annual electronic report to the General Services Administration (GSA).

- GSA Control Number
- Excess Indicator - Site
- Geographic Location - State Code
- Geographic Location - City Code
- Geographic Location - County Code
- Congressional Districts (1 - 10)
- Seismicity

Maint History - Contains historical maintenance cost information

- Fiscal Year
- Deferred Maintenance by Building, Trailer, and OSF
- Site FCI (Buildings only)
- Required Maintenance by Building, Trailer, and OSF
- Actual Maintenance by Building, Trailer, and OSF

Update Area



To access the Area Window, select Administration from the heading menu and then Area from the sub-heading option. The Field Office Name and Number are identified to the left of the command buttons. The Area window has only one link.

Listed below is the data available from within Area window.

Area Info - Contains general Area information.

- Site Name
- Area Number
- Area Name
- M & O Contractor
- Secretarial Office
- Landlord Funding Program

Exercise 2: Site and Area Record Updates

1. Open the Site window from the Administration menu. Review each link for the **Oak Ridge National Laboratory** which is located under **the Oak Ridge Operations office**.

2. From the **Site Info link** for the Oak Ridge National Laboratory, update the site address to reflect a change in the P.O. Box to 6412. Also, change the Landlord Funding Program to Energy Research Analysis. Be sure to save your changes.

3. Click on the Area Sub-heading option under the Administration menu.

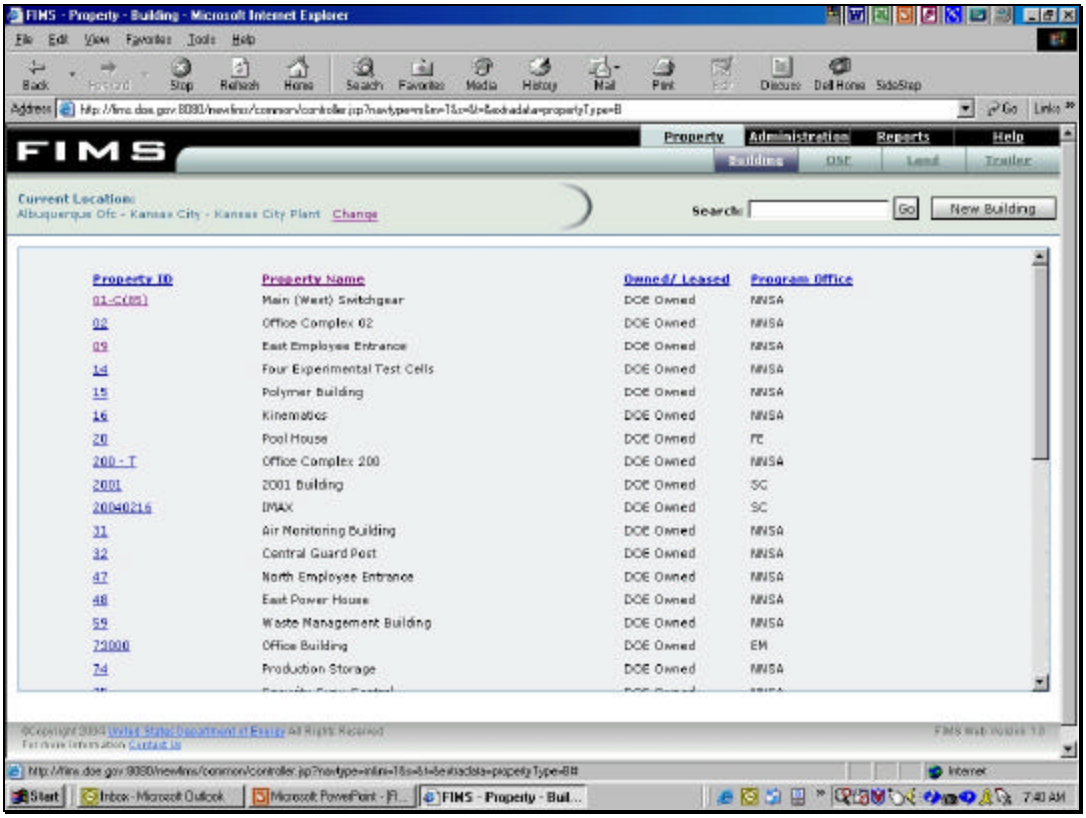
4. Select the **Oak Ridge National Laboratory** area**,** which is located under the **Oak Ridge Operations office**.

5. Return to the Message Board by clicking on the Message Board Sub-heading option under the Administration menu.

5. Property Data Entry

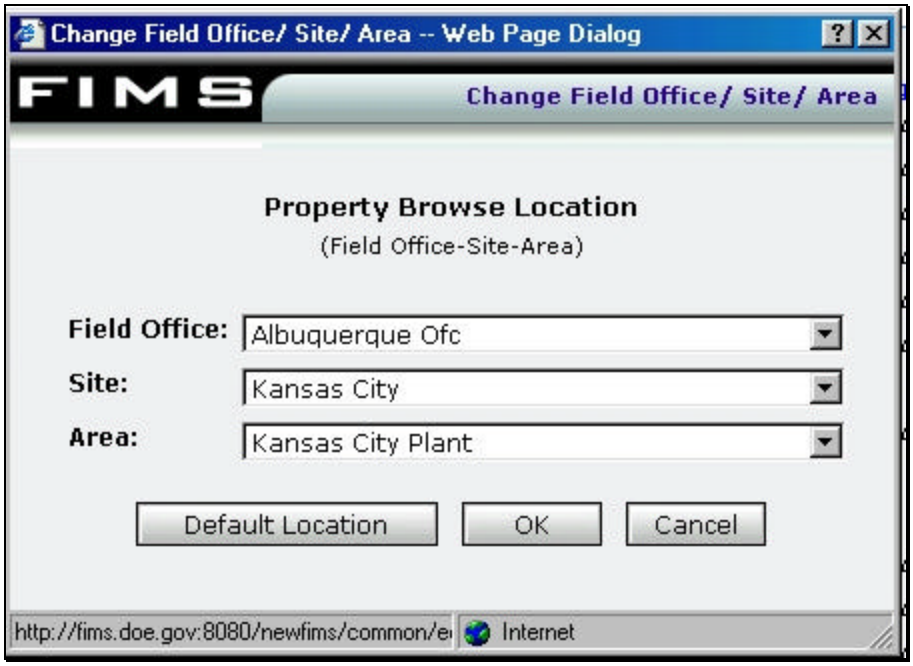
In this section, this manual will define the property data entry process for locating and entering real-property information into FIMS. The process of adding, updating, and deleting properties will be introduced through a series of hands-on exercises.

FIMS maintains four types of properties: Buildings, Other Structures and Facilities (OSF), Land, and Trailers. Once you select one of the property type sub-heading from the Property heading, the following browse window will be displayed. The example below illustrates what a user would see when the Building sub-heading is selected.



Current Location

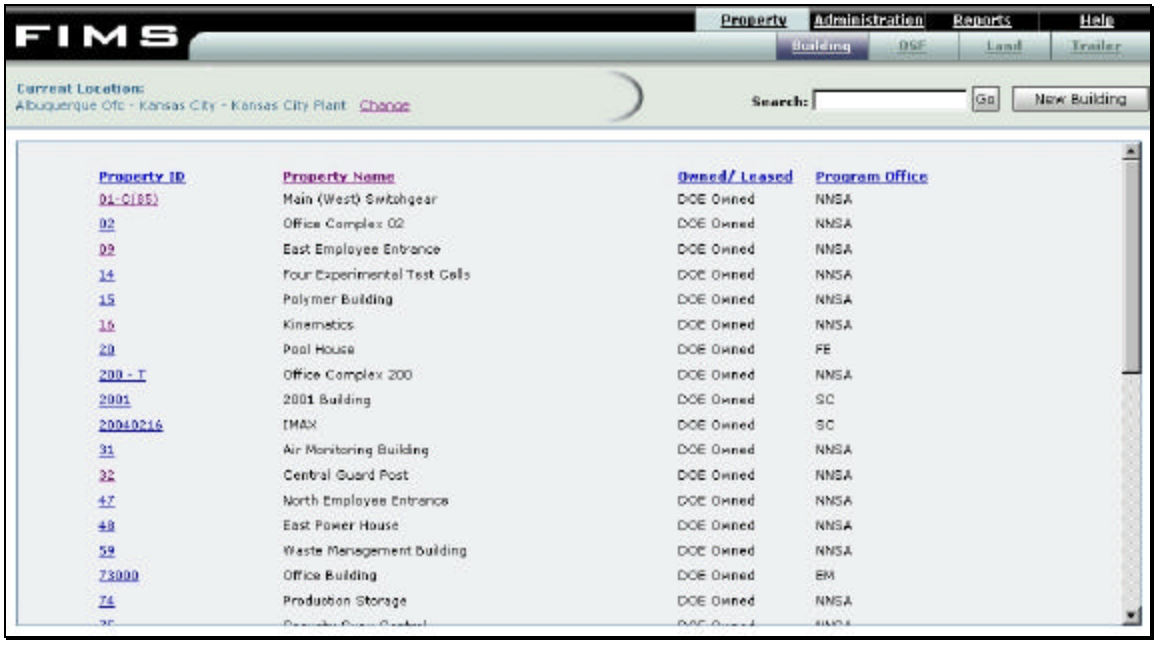
Displayed near the top of the browse window is the current location that is represented in your building list. If you wish to change your location, you can click on the Change link that appears next to the current location. When you do this, the following popup window will appear.



From this window, one field at a time, you will want to make a selection starting with the field office. Once the Field Office is selected, the system will quickly refresh the popup and the list of available Sites for that field office will be available for your selection. Once the Site is selected, the system will quickly refresh the popup and the list of available Areas for that Site will be available for your selection. Once you have made your selection for the new browse location, click on the OK button. You will be returned to the Browse window and it will now reflect a list of buildings for the new location.

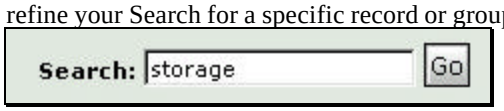
If at any time you wish to return to the original building list when you first started your session, you can always click on the Change location link from the Browse window and then click on the Default Location button from the popup window. You will be returned to the Browse window that will contain a building inventory from your original list.

Search Capability



The Browse window provides the capability to easily search the building list to identify assets you are most interested in updating or reviewing more detailed information. Follow these guidelines for performing a Search.

1. You will first want to sort the Browse window by the field you wish to search by. Sort the window by clicking on the Property ID, Property Name, Owned/Ingrant, or Program Office heading labels. In this example, we have chosen to sort by the Property Name field.
2. Click on the Search field and type the text string that should be used as a filter to refine your Search for a specific record or groups of records.

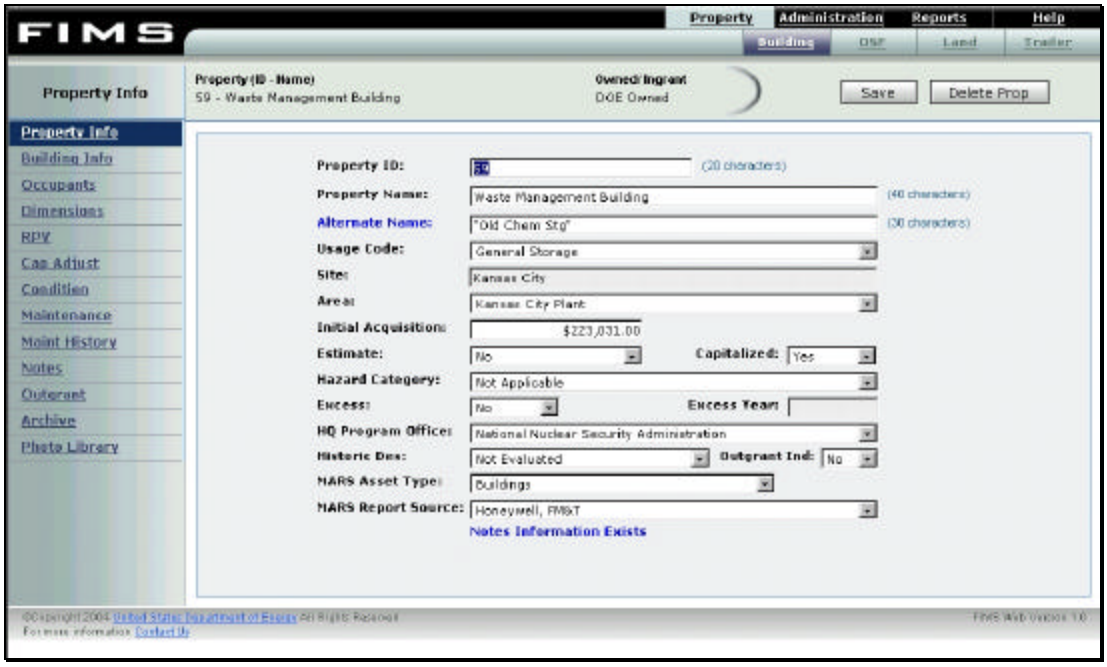
   Example: 

3. Click on the Go command button. The Browse window will refresh and only identify the records that meet your search criteria. In our example, only two records qualified for our search and the word 'storage' is colored in red in the Property Name column.

4. You can click on the Property ID to access more detailed information or click on Clear Search to return to the Browse window where you began.

This process works exactly the same for all 4 property types.

Once you select a specific Property record from the Browse Window, the detail windows and the associated links will appear as in the example below.

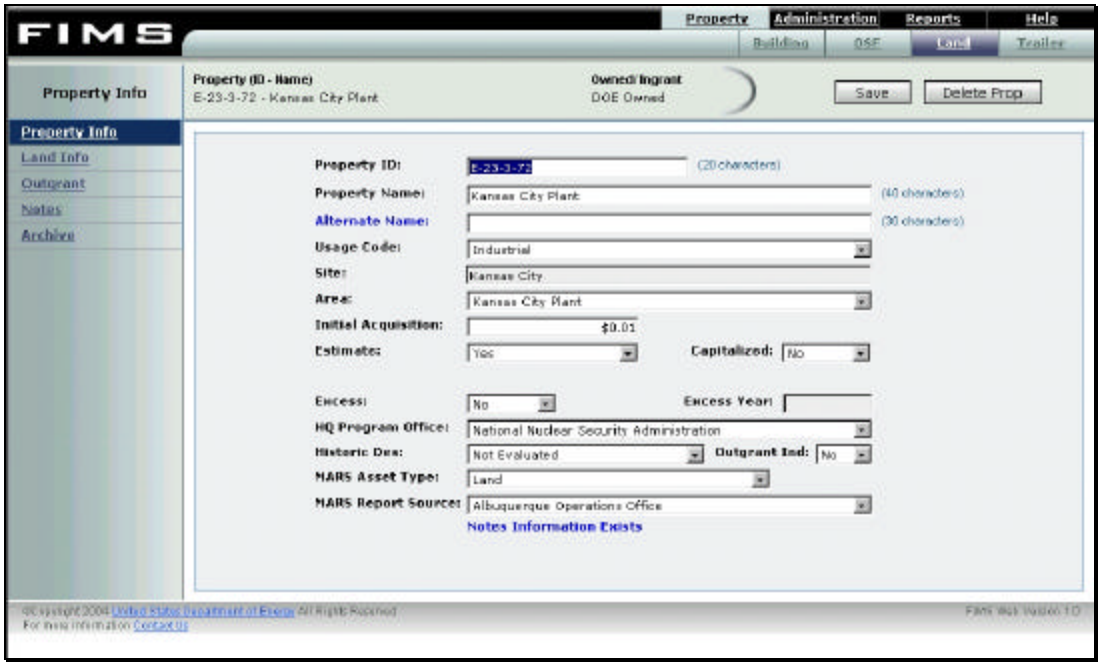


This example represents a building. The main window in the center of the browser contains the detail for the link you have selected on the left hand side. When a property window opens, your starting point will always be the Property Info link. Above the main window, the Property ID, Property Name, and Owned/Ingrant designation are displayed for easy identification.

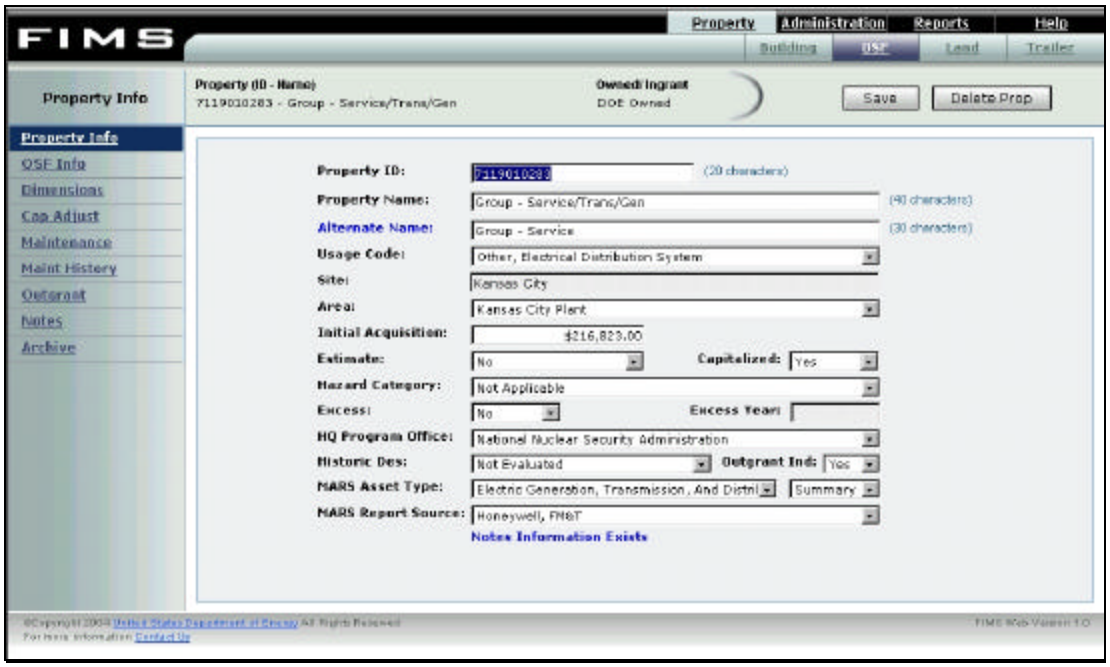
To the right of the identification information are the command buttons that are available to you. Please keep in mind, the display of these buttons will vary based on your security level and the current link you have selected. Any data that you modify **must be saved** before you click on another link. Failure to do so will result in the loss of data. The links on the left will vary based on the Owned/Ingrant designation as well as the property type. For example, there are fewer links available for leased buildings than owned buildings. There are far less links available for land records than building records.

Here are samples of the Land, Trailer, and OSF property windows.

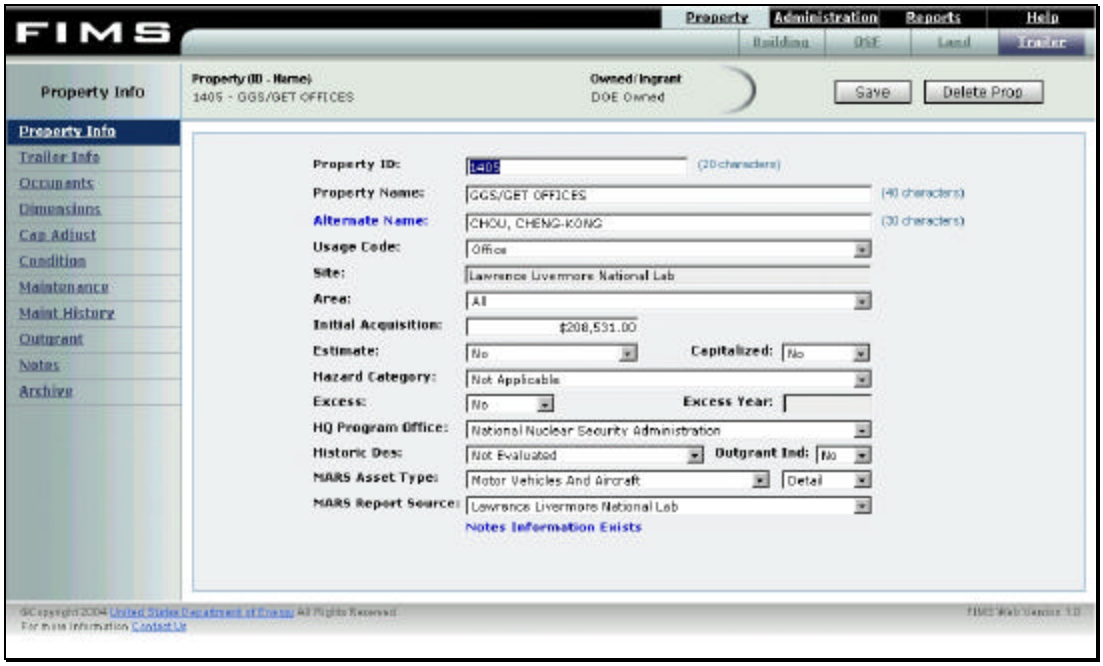
Land



OSF



Trailer



Provided below are some special considerations that you should keep in mind during the entry process.

Special Considerations

➢ **Property ID**	Must be a unique identifier that is assigned to the property.
➢ **Owned/Ingrant Indicator**	Data Entry requirements will change based upon the selection for the Owned/Ingrant Indicator.
➢ **Summary/Detail Indicator**	Required for OSF and Trailer/Modular only. Indicates if these properties have been input as one summary level record or multiple detail records. Data entry requirements for Trailers will change based upon the selection of this indicator. For summary level trailer records, the Handicap information is exempt from input.

- **Summary Condition** — The system automatically recalculates this field anytime the Replacement Plant value, Gross Sqft, or Deferred Maintenance fields are updated.

- **Outgrant Indicator** — In order to input data in the Outgrant link, the user must select a value of 'Yes' for this field on the Property Info link. . If Outgrant data has been input and the user changes the Outgrant Indicator 'No', the system will automatically delete all Outgrant records under the Outgrant link.

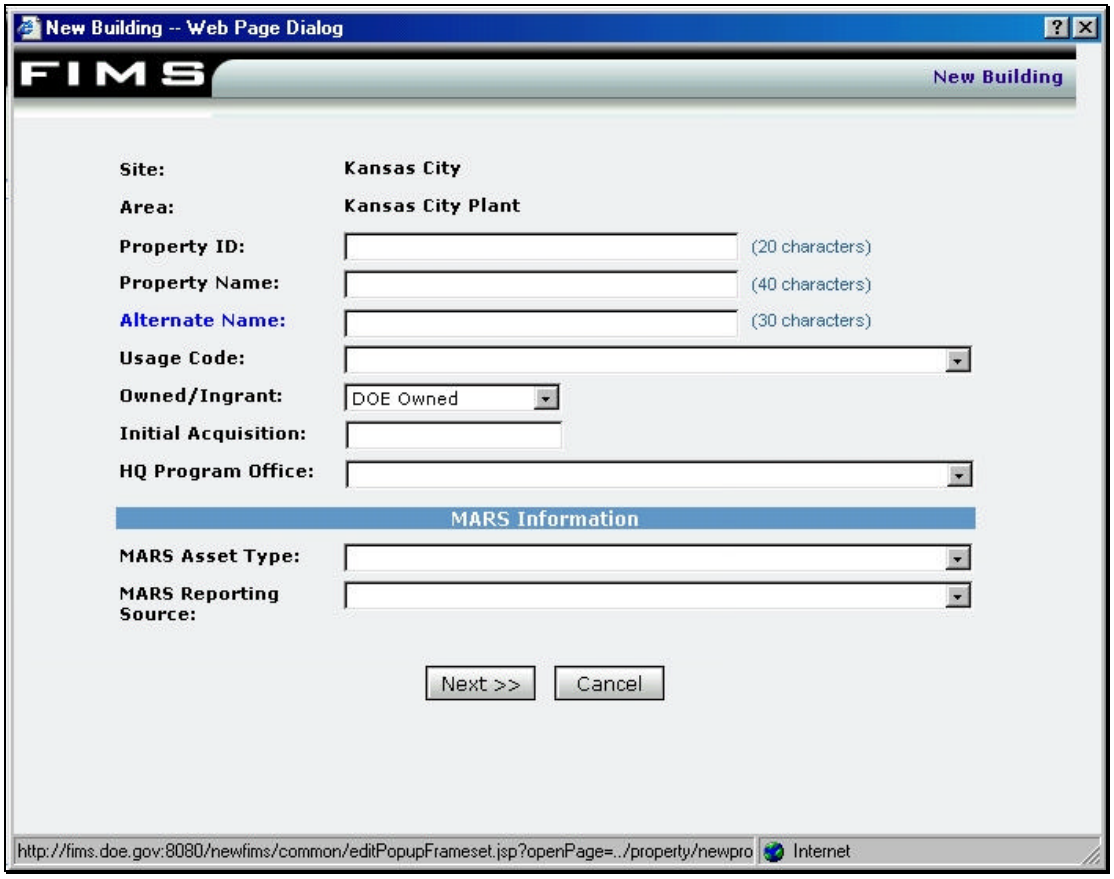
- **Occupant Indicator** — If the Occupants Indicator is set to a value of 'No', the system will not allow you to access the Occupants link until the Occupants indicator is set to 'Yes'. If Occupants have been input and the user changes the Occupant Indicator to 'No', the system will automatically delete all Occupant records under the Occupant link.

- **Institutional Control Land Records** — When creating an Institutional Control record, the user must ensure that the acreage on the original land record be reduced

Adding New Property's

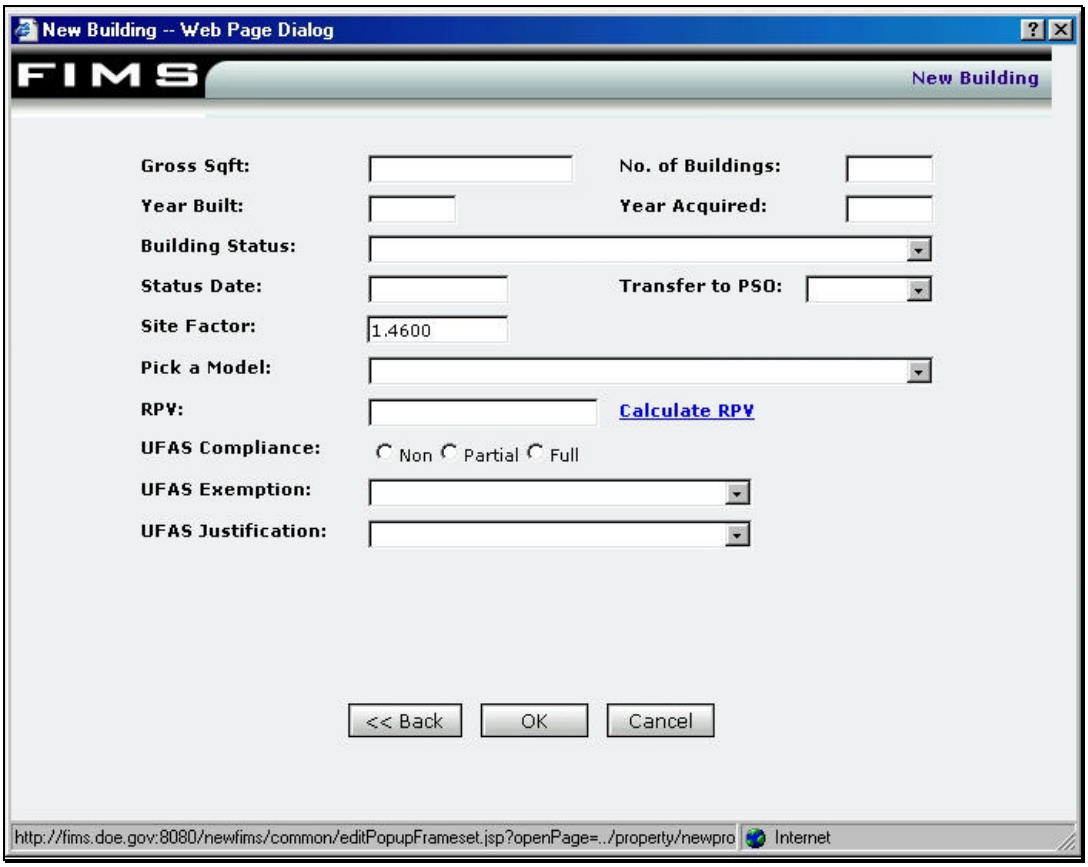
Each of the property type Browse windows contains a new button for creating a new building, land, trailer or OSF record in FIMS. FIMS utilizes a wizard-based approach for adding new properties. Basically, the minimum required fields are input by the user prior to the record being added to the database. In the example below, we will outline the process for adding a new building record. The process is essentially the same for the other 3 property types.

From the Building Browse window, click on the New Building command button. The following window will appear.



This is the first of two windows that contain information that must be input before the record is saved in the FIMS database. From this window, the user will populate the data fields and then click on the Next button. If you wish to quit the new building process, simply click on the Cancel button and you will be returned to the Browse window.

Once you click on the Next button, the second and final window will appear.



These two windows represent the minimum data fields that must exist before a new record can be saved in the database. Once the user populates this window, the user will click on the OK button. You will then be taken to the detail property screens where you can continue to update information for this building record. You also have the opportunity to click on the Back button if you wish to modify any data input on the previous screen. If you wish to quit the new building process, click on the Cancel button. You will be returned to the Building Browse window.

The process for the other 3 property types is exactly the same as the outlined process here for a new building.

Listed below is a summary of the available links from within the Property windows. The FIMS Data Element Dictionary contains detailed definitions for each of these data elements.

Property Info - Contains general property specific information.

- Property ID
- Property Name
- Owned / Ingrant Indicator
- Alternate Property Name
- Property Name

- Usage Code
- Area Name
- Initial Acquisition Cost
- Estimate Indicator
- Capitalized Indicator
- Excess Indicator - Property
- Excess Year
- Outgrant Indicator
- HQ Program Office
- Historic Designation
- MARS Asset Type
- MARS Reporting Source
- Hazard Category

Building Info - Contains Building specific information.

- Property ID
- Property Name
- Owned / Ingrant Indicator
- Land Ownership Code
- Building Status
- Building Status Date
- Transfer to PSO
- Occupants Indicator
- Status Utilization
- Seismic Exemption Code
- Seismic Essential Code
- UFAS Compliance
- UFAS Exemption
- UFAS Justification

OSF Info - Contains OSF specific information.

- Property ID
- Property Name
- Owned / Ingrant Indicator
- Land Ownership Code
- Structure Replacement Plant Value (RPV)
- Year Acquired

- Deficiency Systems (1 - 5)

Land Info - Contains Land acquisition specific information.

- Property ID
- Property Name
- Owned / Ingrant Indicator
- Acquisition Method Code
- From Acquisition Date
- To Acquisition Date
- Rural Acreage
- Urban Acreage

Trailer Info - Contains Trailer/Modular specific information.

- Property ID
- Property Name
- Owned / Ingrant Indicator
- Trailer Replacement Plant Value (RPV)
- Site Factor
- Trailer Status
- Status Date
- Transfer to PSO
- Seismic Exemption Code
- Seismic Essential Code
- Occupants Indicator

Occupants - Contains Building and Trailer/Modular occupancy specific information.

- Property ID
- Property Name
- Owned / Ingrant Indicator
- Occupant ID
- Occupant Name
- Occupant Type
- No. of Employees

Dimensions (Buildings) - Contains Building measurement specific information.

- Property ID
- Property Name

- Owned / Ingrant Indicator
- Gross Area - Square Feet
- Net Occupiable Square Feet
- No. of Buildings
- No. of Floors
- No. of Floors Below Grade
- Energy Consuming Building/Facilities
- Energy Consuming Industrial and Lab Facilities
- Energy Consuming Metered (Exempt) Facilities
- Non Energy Consuming Building Facilities
- Meters (1 - 4)
- EMS4 Site Number

Dimensions (OSF) - Contains OSF measurement specific information.

- Property ID
- Property Name
- Owned / Ingrant Indicator
- Primary Dimension Code
- Primary Unit of Measure

Dimensions (Trailers/Modulars) - Contains Trailer/Modular measurement specific information.

- Property ID
- Property Name
- Owned / Ingrant Indicator
- Gross Area - Square Feet
- No. of Trailers
- Energy Consuming Building/Facilities
- Energy Consuming Industrial and Lab Facilities
- Energy Consuming Metered (Exempt) Facilities
- Non-Energy Consuming Building Facilities
- Meters (1 - 4)
- EMS4 Site Number

Capital Adjustments - Contains Adjustment/Improvement cost specific information for Buildings, Trailers/Modulars, or Other Structures and Facilities (OSF).

- Property ID

- Property Name
- Owned / Ingrant Indicator
- Initial Acquisition Cost
- Total Adjustments
- Total Costs
- Capitalized Indicator
- Adjustment Date
- Adjustment Cost
- Adjustment Description

Condition - Contains deficiency/condition specific information for Buildings or Trailers/Modulars.

- Property ID
- Property Name
- Owned / Ingrant Indicator
- Summary Condition
- Deficiency Systems (1 - 5)
- Year Acquired
- Year Built
- Model Building Type
- Seismic Comments
- Design Use

RPV - Contains the building Replacement Plant Value. Value can be system generated or input by the user.

- Building RPV
- Model
- Site Factor

Ingrant 1 - Contains ingrant or permit specific information.

- Property ID
- Property Name
- Owned /Ingrant Indicator
- Contract No.
- Grantor Name
- Grantor Address, City, State, Zip
- Location Address, City, State
- Grantee

- Grantee Cancellation Rights Indicator
- Grantee Cancellation Rights - Days Notice
- Grantor Cancellation Rights Indicator
- Grantor Cancellation Rights - Days Notice
- Effective Date
- Expiration Date
- Initial Date
- Ingrant Square Feet
- Annual Rent
- Other Costs

Ingrant 2 - Contains leasing or permit specific information.

- Property ID
- Property Name
- Owned / Ingrant Indicator
- Renewal Options
- Renewal Options - Additional Years
- Renewal Options - Days Notice
- Renewal Rent Next Option
- Annual Rent - Lab, Office, Other
- Escalation Year - Other, Services, Taxes
- Responsible Party - Interior
- Responsible Party - Exterior
- Responsible Party - Sewage
- Responsible Party - Janitorial
- Responsible Party - Utilities
- Responsible Party - Electric
- Responsible Party – Refuse

Outgrant - Contains detailed information for Outgrants.

- Property ID
- Property Name
- Owned / Ingrant Indicator
- Agreement Number
- Outgrant Type
- Effective Date
- Expiration Date

- Grantee Name
- DOE Receipts
- Receipt Type
- Outgrant Acreage/Sqft
- Renewal Options
- Grantor Cancellation Rights
- Grantee Cancellation Rights
- Outgrant Other

Maintenance- Contains maintenance specific information for Buildings, Trailers, and OSF's.

- Property ID
- Property Name
- Owned / Ingrant Indicator
- Deferred Maintenance cost
- Most Recent Inspection Date
- Annual Required Maintenance
- Annual Actual Maintenance
- Conventional Facility Indicator
- Modernization Planning Indicator
- Rehab and Improvement Cost

Maintenance History - Contains maintenance history information for Buildings, Trailers, and OSF's.

- Property ID
- Property Name
- Owned / Ingrant Indicator
- Maintenance Fiscal Year
- Deferred Maintenance cost
- Most Recent Inspection Date
- Annual Required Maintenance
- Annual Actual Maintenance

GSA Assigned - Contains detailed information from the GSA rent bill for GSA Owned and GSA Leased facilities.

- Property ID
- Property Name
- Owned / Ingrant Indicator
- Total Bill (Annual $)

- Total No Occupants
- Structured (Inside) Parking
- Surface (Outside) Parking
- Assigned Usable Space
- Common Storage Space
- Shell Rental Space

Notes - Contains miscellaneous information about a property in a free form text format.

- Property ID
- Property Name
- Owned / Ingrant Indicator
- Property Notes

Exercise 3: Adding a New Building Record

Please remember that your data is being validated and you may receive data validation messages.

1. Click on **Building** under the **Property** Heading.

2. While at the Building Browse window, click on the **New Building** command button.

3. Enter the required fields for the two popup windows.

4. Once the record has been added to the database, review the different links and update additional fields as needed.

5. Be sure to click on the **Save** command button when changing any data.

6. When finished, click on **Building** under the **Property** Heading and review the Browse list to see the record you just added.

Exercise 4: Adding a New OSF Record

1. Click on **OSF** under the **Property** Heading.

2. While at the OSF Browse window, click on the **New OSF** command button.

3. Enter the required fields for the two popup windows.

4. Once the record has been added to the database, review the different links and update additional fields as needed.

5. Be sure to click on the **Save** command button when changing any data.

6. When finished, click on **OSF** under the **Property** Heading and review the Browse list to see the record you just added.

6. Deleting and Archiving Properties

In this section, this manual will review the delete and archive processing as well as define the procedures for photo uploading.

Deleting or Archiving a Property

Among many other things, FIMS is now used assist DOE in complying with reporting on elimination of excess facilities by creating congressional reports that will reflect the addition and reduction in building square footage at each site during the previous fiscal year. The reductions can be the result of demolition, sale, or transfers to other federal agencies. For new facilities, the Year Built will be used to identify building square footage that was added to a site's inventory. Guidance to this effect was signed out on August 9, 2002 by Bruce M. Carnes (ME-1).

A federal standard (Federal Financial Management System Requirements, JFMIP-SR-00-4), published in October 2000, states federal agencies will retain all real property inventory system records within the system. As a result of these two requirements, no real property records should be deleted from the system unless it's a result of a data entry error or to make other corrections. The archive capability should be utilized to retain information on DOE owned real property that has been sold, demolished, transferred, etc. It's also important to note that when there is a change in building status, the status date must be updated to reflect this. The status date, along with the excess indicator/year, are critical for the congressional reports. Any data changes/updates to the real property records need to be made prior to the archive. Once archived, the information cannot be modified by the sites.

Deleting a property record can be accomplished from any file folder window by using the **Delete Prop** command button. It is important to be aware that when properties are deleted from FIMS, the information associated with that property is no longer available. You should only delete a property in the event of a data entry error or to make other corrections.

Archiving a property record can be accomplished from any file folder window by using the **Archive** link. Building records can only be archived if the building status identifies the building as being sold, demolished, or transferred. The system will confirm your intention to Archive. This is your opportunity to

cancel the process. By indicating your intention to proceed, the system will extract selected data from the real property record and store that in the archive tables within the FIMS database. Reference the FIMS User's Guide, Chapter 11, for a listing of all data elements that are captured during the archive process. Once the record has been archived, the system will automatically delete the real property record and all of the associated information from each of the file folders.

Special Note for Land Archiving: If a portion of a sites land holdings have been sold or transferred to another federal agency, this amount of acreage must be archived. In order to accomplish this, the user must first add a new land record that reflects the acreage that has been sold or transferred. Once this record has been added, it should be subsequently archived. The last step in this process is to modify the original land record and reduce the acreage by the amount previously archived in the prior step.

To gain access to data that has been archived, four standard reports are available to allow you to obtain a hardcopy of the information. The four reports are: #78 Archive Land Report; #79 Archive Building/Trailer Report; #80 Archive OSF Report; #81 DOE Archive Building Summary.

Example: Deleting a Building Record

1. Click on **Building** from the **Property** Heading.

2. Select the building record to be deleted by clicking on the Property ID.

3. From any of the available links, click on the **Delete Prop** command button.

4. You will be asked to confirm your intention to delete the property identified next to the command buttons.

5. Click on **YES** to confirm that you wish to delete this record. Once the record is deleted, it cannot be restored. If you click on **No**, you will be returned to the property detail links.

Example: Archiving a Building Record

1. Click on **Building** from the **Property** Heading.

2. Select the building record to be archived by clicking on the Property ID.

3. Click on the **Archive link**. The **Archive command button** will not appear unless the Building Status does not designate the building as being demolished, sold, or transferred to another federal agency. If this is the case, you will need to go to the Building Info link and make the appropriate selection for the Building Status. It's also important to designate the correct status date when this disposition occurred. It's important to note that all data should be updated prior to the archive. Once the record is archived, the data cannot be changed by the user.

4. When you return to the **Archive Link**, the **Archive command button** will appear.

5. Once you click on the **Archive command button**, you will be asked to confirm your intention to archive this property record.

6. Click on **Yes** to indicate your intention to initiate the archive. Once the record is archived, you will be returned to the Building Browse window.

Exercise 4: Updating an Owned Structure

1. Click on **OSF** under the **Property** Heading to review the OSF Browse window.

2. Select the record with **Property ID 2032** by **clicking** on the **Property Id**.

3. On the Property Info link, set the Historic Designation to **Not Eligible**. Be sure to click on the **Save command button** before moving onto other links.

4. Insert a Capital Adjustment record for a **$12,500 Cooling Fan on 3/23/2004.** This is **not Capitalized**.

5. Set the Deficiency System to **HVAC systems**. Update the Deferred Maintenance cost to reflect **$24,000** and the last inspection date to be **04/01/2004.**

6. Continue to move to other links to update information as you wish.

7. When finished, click on **OSF** under the **Property** Heading to return to the OSF Browse window.

Exercise 5: Update an Owned Building

1. Click on **Building** under the **Property** Heading. Select building with Property ID 4501. Be sure as you change data, to **click on Save** before moving onto the next link.

2. Modify the **Prop Info Link** to reflect the following:
   Historic Designation: Not Eligible

3. Go to the **Building Info link** and change the Building Status from Operating to Shutdown Pending Transfer. Notice what happens to the label for Status Date and Transfer to PSO. Enter a Status Date of 02/02/2004 and EM for the Transfer to PSO.

4. Enter the following in the **Capital Adjustments tab**:

Capitalized: Yes	03/01/2004	40,000	New Roof
Capitalized: No	03/31/2004	16,000	Window Replacements

   Notice that the display fields on the top of the window change to reflect your additions.

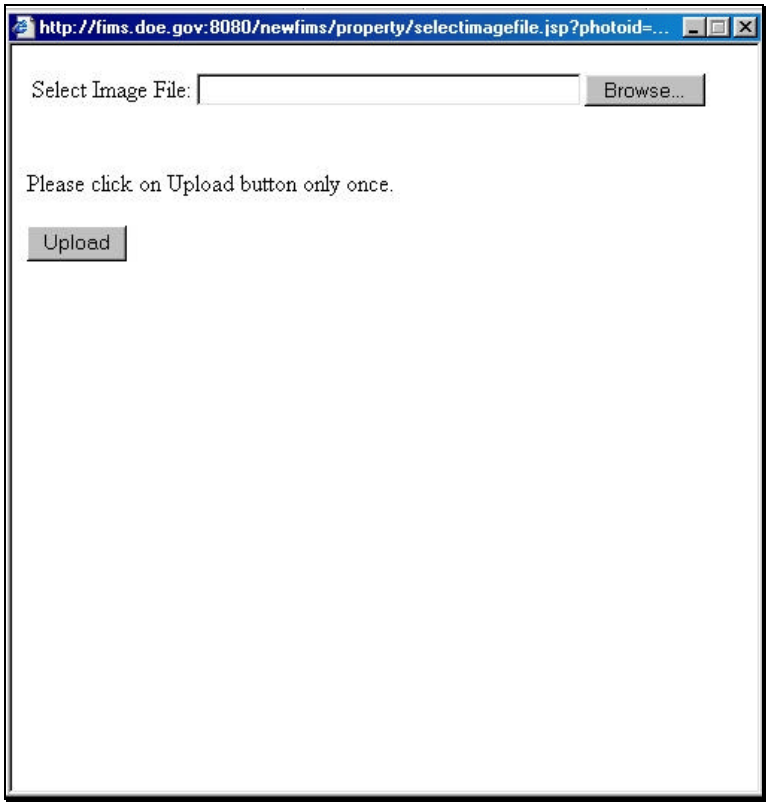
5. Go to the **Dimensions link**. Select Elect/Gas for the first Meter field.

6. When finished, click on **Building** under the **Property** Heading to return to the Building Browse window.

Photo Processing

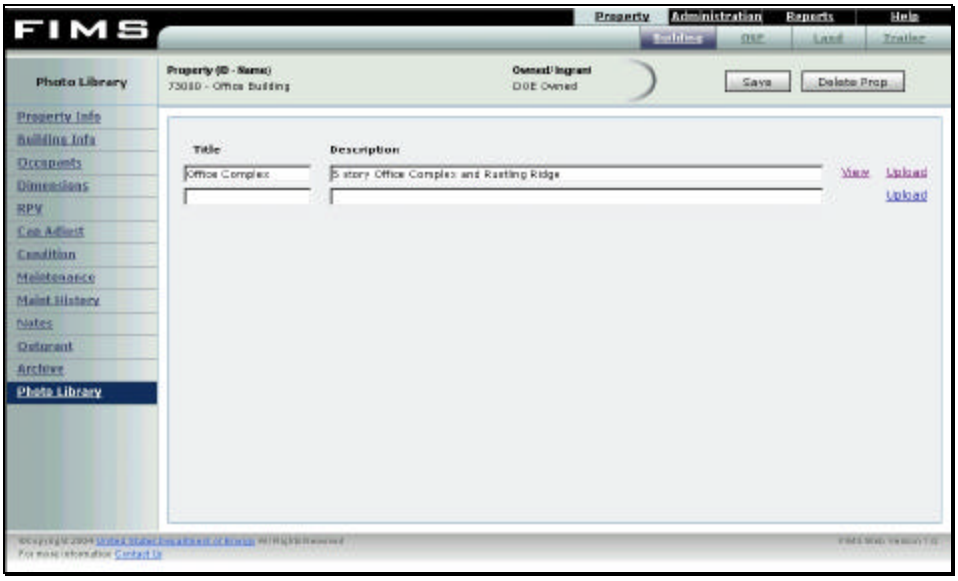
Under Buildings, you will have the capability to upload up to 2 building images for each of your building records. FIMS supports both jpg and gif formats for the images. The file sizes should be no larger than 200,000 bytes. There will be safeguards in place to prevent users from uploading excessively large files. The process for performing the upload and viewing of photos is provided below.

1. Click on the **Photo Library link**.
2. If there are already images uploaded for a particular property, a view link will be displayed next to the Title and Description.
3. In order to upload an image, **input a Title and Description** for the image. Click on the **Save** button.
4. Click on the **upload link**. The following window will appear.



5. Click on the **Browse button** and locate the image file you wish to upload.
6. Once the image is selected, click on Open and you will be returned to the upload window with the location of the image file displayed at the top.
7. Click on the Upload button once to initiate the upload of the image to the FIMS database. When the upload is completed, you will receive a message that it successfully uploaded. Click on the Close button.
8. Click on Save. The View link will appear.

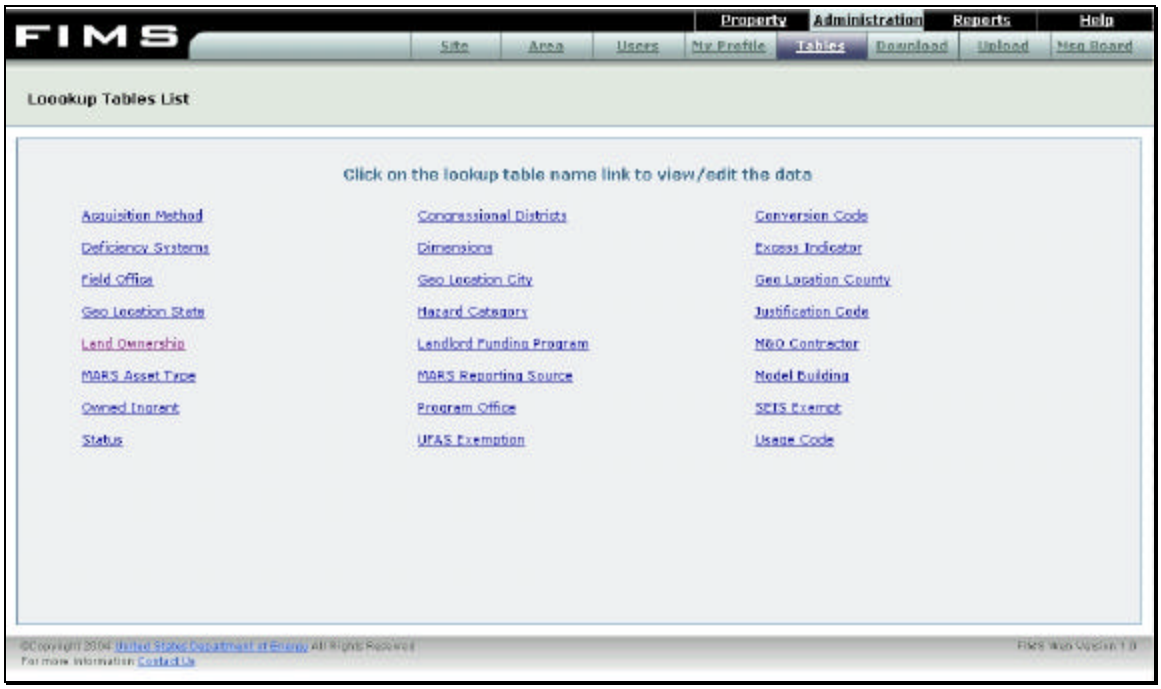
9. Click on the view link to preview the image you just uploaded. An example is provided below.



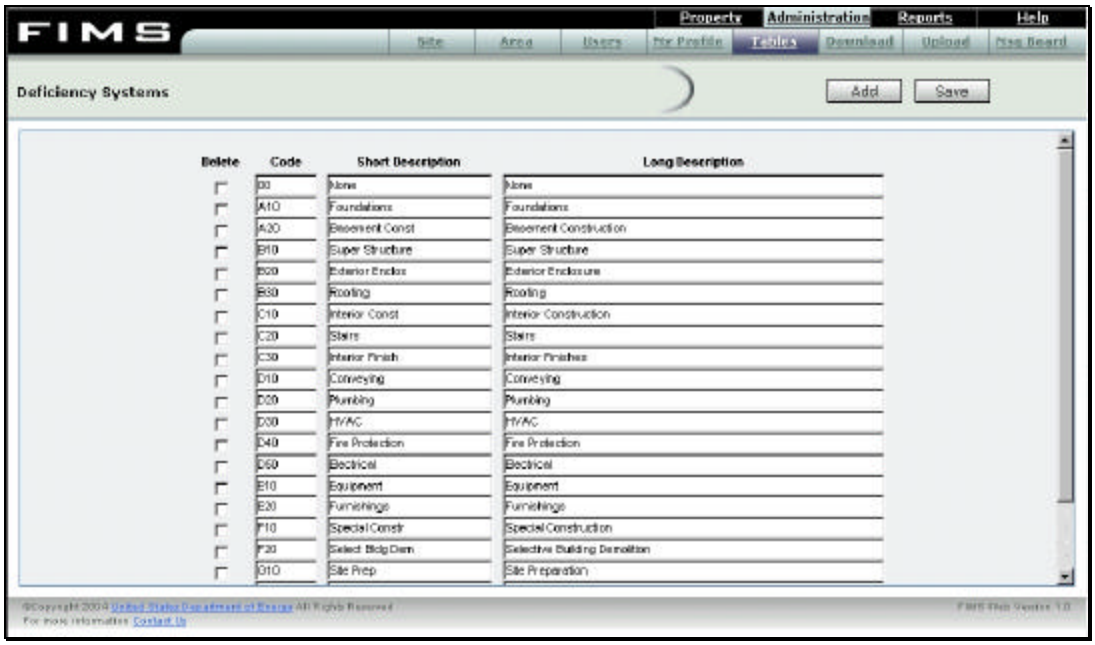
7. Lookup Tables

The Lookup tables contain all of the codes and descriptions that are provided from the pick list data entry fields. Lookup table maintenance is performed by the FIMS System Administrator at Headquarters. All other security levels will have read-only access to the lookup table information.

Under the Administration Heading, you can click on Tables. The following window will be displayed.



To open a table, simply click on the table name. The lookup table will then open. The example below, displays the Deficiency table.

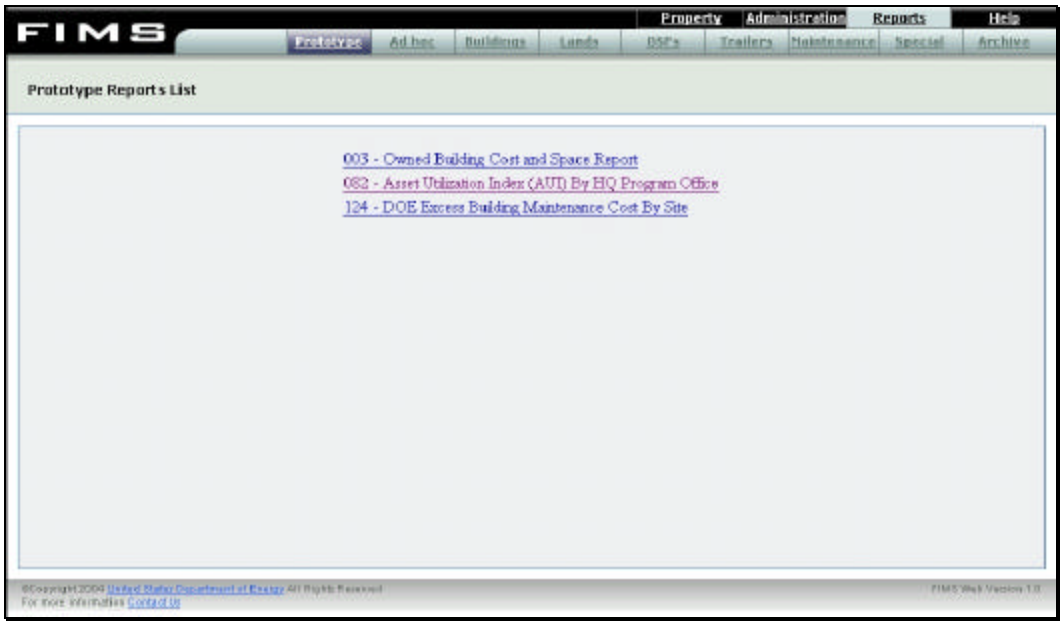


In most cases, the Add and Save buttons will not be displayed. They are reserved for the Headquarters FIMS System Administrators.

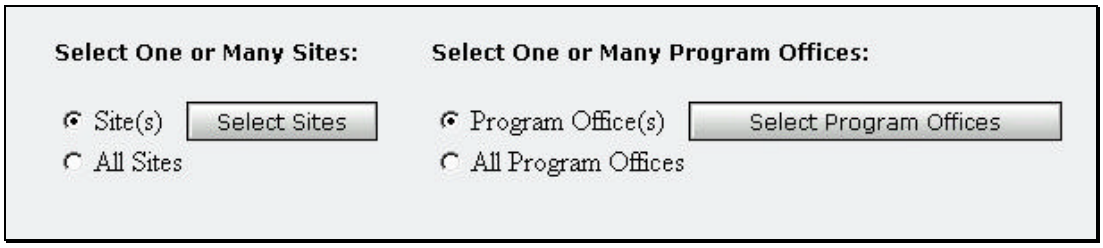
8. Standard Reports

FIMS has a number of pre-defined standard reports for Buildings, Land, Other Structures and Facilities (OSF), and Trailers. In addition, there are also a series of maintenance and specialized reports that pertain to all property types.

To access the standard reports, click on the Reports heading. The following window will appear.



From this window, you have menu choices of Buildings, Land, OSF's, Trailers, Maintenance, Special, and Archive type standard reports. Once you make one of the selections, a menu of reports will be displayed. To generate a report, simply click on the reports. Most of these reports will take you to a window where you will supply additional information to refine the data that will be qualified for your reports. An example of this is provided below.



Once you have made your selections, simply click on the Print Preview button to see the results of the report. You are given the option of generating the report in PDF, HTML, and Excel format.

Exercise 6: FIMS Standard Reports

Property Detail Report

1. Click on Reports and select the building category.
2. Click on report #03 Owned Building Cost and Space Report
3. Select Oak Ridge National Laboratory site and area under the Oak Ridge Operations office.
4. Select the report format of PDF.
5. Click on Print Preview to review your reports.

---

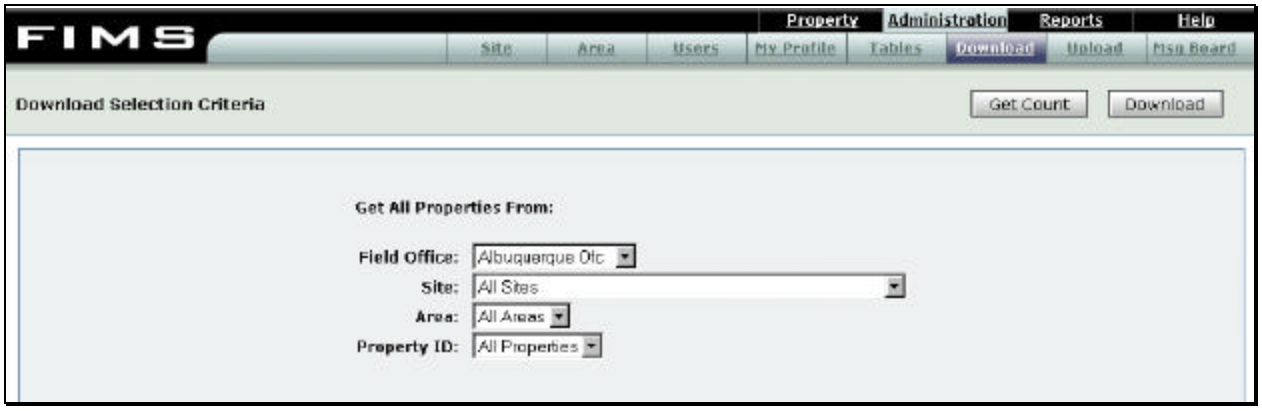
9. Downloading and Uploading

In this section, this manual will define the procedures for downloading FIMS data to your PC. In addition, this section will define the procedures for uploading information into the FIMS data base.

Downloading FIMS Data

FIMS allows you to download real property data directly into a Microsoft Access data base file. You may specify the location that you wish the file to be stored. The downloaded file name will be called DOWNLOAD.MDB. This is a stand-alone file that can be easily distributed to others and is not dependent on FIMS being installed to use the information.

To initiate a data download, select Download from the Administration Heading. You will then see the following window appear.



From this window, you can select the Field Office, Site, Area, and Property ID to qualify the data for your download. The Get Count command button allows you to see how many records you will qualify prior to the download. To initiate the download, click on the Download command button. You will be notified when the process is complete.

Uploading Data into FIMS

The Upload facility incorporates data from external sources into the FIMS database. There are two parts to the upload process. The first part extracts the data from a local outside source. This step is to be performed by the various programmers supporting the 'source' database. The second part uploads the data to the FIMS database server.

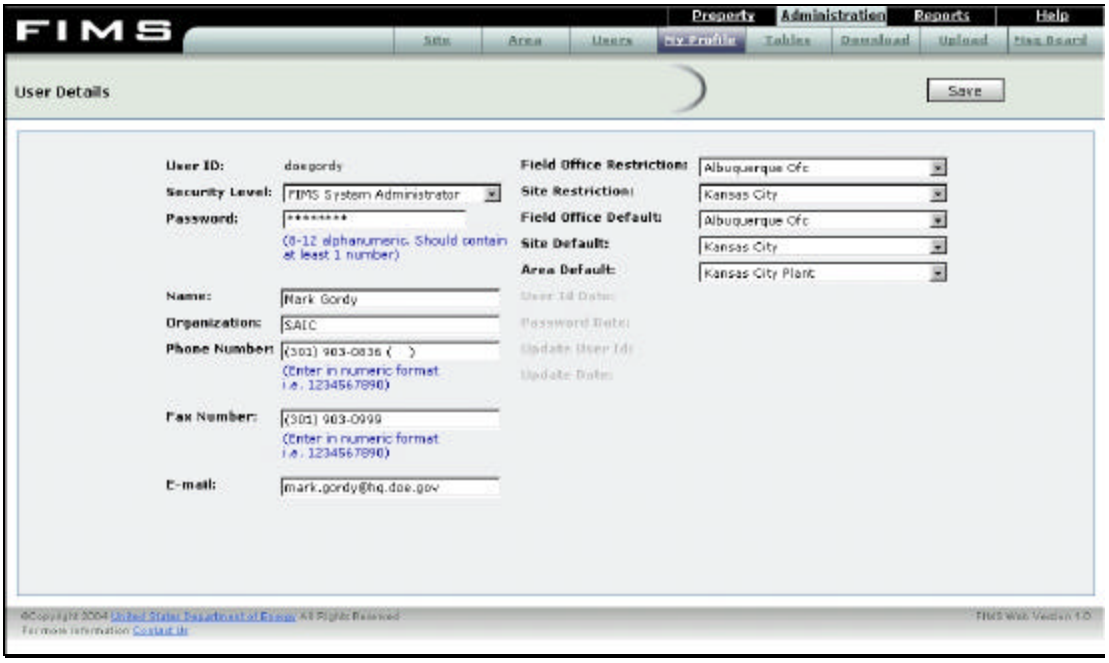
Specific instructions are provided in the FIMS User Guide outlining the upload file format specifications. Once the data is in the required format, you can initiate the process to upload the data by selecting upload from the Administration Heading.

You can click on the browse button to select the fields and data files. Once you have selected your files, click on the Upload command button once. The data that passes the validation criteria will be moved to the FIMS database. All messaging will be displayed on this window at the conclusion of the upload.

10. Administration

In this section, this manual will review the options available under My Profile and access to the Message Board.

My Profile



Under My profile, you can modify your login password, update your phone, fax, and email address. Your password must be between 8 and 12 characters. You can also set your default location when you access the property windows.

If you are logged into FIMS and wish to review the message board, click on Message Board under the Administration Heading. A sample of the Message Board is below.

11. Help

In this section, this manual will describe functionality of the online help facility.

Help Index

FIMS on-line Help provides quick and convenient access to information about a task or feature you would like to know more about. The online help is essentially a compiled version of the FIMS User's Guide. The Help function can be accessed by selecting Help from the Heading menu.

12. Exit FIMS

If you wish to exit FIMS, simply close your Internet Explorer browser.

13. FIMSWeb Ad-hoc Queries

An ad-hoc reporting tool is built into the FIMSWeb application. It provides picklists of tables and columns that are used to create a query.

Creating a New Ad-hoc Query

To create a new ad-hoc query, click the **New Report** button.

1) Enter a Report Name.
2) Set the Report Access to Private or Public. Private will allow only you the creator to view/run the report. Public will allow everyone with system access to view/run the report.
3) Select the Default Output Type from the picklist. PDF format will allow you to run the query and view the output in Adobe Acrobat reader format. HTML format will allow you to run the query to a web format with just column headings at the top of the first page. This format works best for viewing the query output on the screen, but doesn't print well. Excel format will run the query and format it in Microsoft Excel spreadsheet. The output selection you choose will become the default format for your query. You will be allowed to change the output type before running the query.
4) Select the FIMSWeb Table that you wish to extract data from for your query.
5) Click the **OK** button to continue. The General Info window will open displaying the information you input on the New Query window.
6) Click the Columns link. A list of Available Columns is displayed. Click the first column you wish to display on your query, then click > button to move the column to the Selected Columns list.

   You may also click the first column and then use **[Shift]** + click to select additional columns and move them with the > button all at one time.

   The >> button will move everything from the Available Columns list to the Selected Columns list.

   The < button will move the highlighted columns from the Selected Columns list to the Available Columns list.

   The << button will move everything from the Selected Columns list to the Available Columns list.

   The **Move Up** and **Move Down** buttons allow you to change the position of the columns in the Selected Columns list. The columns should be selected/placed in the order in which they are to display on the query output in left to right order.

Click the **Save** button to save selections on the Columns window.

7) Click the Filter Criteria link. This window allows you to setup criteria for your query to narrow the amount of data that is retrieved. If you setup no criteria for your query, data will be retrieved for the entire database.

   Select a Column from the available choices in the picklist. Use columns like Site Number, Owned/Ingrant Indicator, Property Type, Excess Indicator, etc. to narrow the amount of data retrieved.

   Select an Operator from the choices available in the picklist.

   Enter a Default Value for the column selected. If the Default Value is incorrect, no data will be retrieved. For example, Site Number = '01004'. Non-numeric values must be placed in single quotation marks.

   If you are entering more than one line of Criteria, select a logical operator from the picklist. The **And** operator will force all rows of criteria to be met before a record is selected for the query. The **Or** operator will allow records to be selected for the query if only one row of criteria is met.

   The Delete checkbox will remove a line of Criteria from your query. Click the checkbox beside the criteria line that you wish to delete. When you click the **Save** button, the line will be removed.

   Click the **Save** button to save selection on the Filter Criteria window.

8) Click the Sort Order link. This window allows you to sort the data retrieved by your query.

   Select a column from the Sort By picklist.

   The column will sort in ascending order if the Ascending checkbox is checked.

   Click the **Save** button to save selections on the Sort Order window.

Click the Quick View link to run the query in the Default Output Type selected.

Edit an Ad-hoc Query

To edit an existing ad-hoc query, from the Ad hoc Reports List, click the Edit link to the right side of the query.

This will open the ad-hoc report processing. The General Info, Columns, Filter Criteria, and Sort Order links are available. Use the processes in the previous section for editing any of the existing information on these windows.

Click the **Save** button after making changes to each window.

Click the Quick View link to run the query in the Default Output Type selected.

Running an Ad-hoc Query

To run an ad-hoc query, from the Ad hoc Reports List, click the Run Report link to the right side of the query.

The query criteria will display. You may change the criteria and the Report Format each time you run a query.

After making changes to the criteria and Report Format, click the **Run Report** button. The report will be displayed on your desktop.

To print the report select, File, Print.

If you select Excel as the Report Format, you will be prompted to Open and Save the report. Open will allow you to view the report in Microsoft Excel. Save will allow you to save the Excel file to a location of your choice.

Deleting an Ad-hoc Query

To delete an ad-hoc query, from the Ad hoc Reports List, click the Delete checkbox to the left side of the query you want to delete. You may delete more than one query by checking multiple checkboxes. Click the **Delete Checked** button to delete the query(s). A message will display asking you to confirm that you want to delete the query(s). The query(s) are removed from FIMSWeb and cannot be retrieved.

THIS PAGE INTENTIONALLY LEFT BLANK.

MICROSOFT

ACCESS 2000

14. Access Database Concepts

Microsoft Access is a relational database management system, which allows storing and retrieving of information from a database. A relational database can be defined as consisting of data stored in a collection of tables, each containing data related to one subject. Each table includes a field(s) that also exists in other tables, these like fields allow you to link the tables so the information in the tables can be shared.

Microsoft Access was selected by the Facilities Data Development Committee (FDDC) as the end user tool for creating customized FIMS queries and reports. It was chosen because of its friendly graphical user interface which allows choices to be made from picklist to develop queries and reports.

In this section we will discuss how the data is stored in FIMSWeb, the FIMSWeb table naming conventions, and how to crosswalk the FIMSWeb application windows to the FIMSWeb database tables.

FIMSWeb Tables

FIMSWeb data is stored in tables. Picture a table as a series of rows and columns storing the information, much like a spreadsheet. In a FIMSWeb table, each

horizontal row is a separate record containing information about a site, area, or property (building, land, structure or trailer/modular). Each vertical column represents a data field or data element, such as site number, property name, or acquisition cost.

Some of the tables in FIMSWeb are referred to as master tables. These tables contain the detailed information about each site, area, and property tracked within FIMSWeb. All FIMSWeb master tables use the **FIMS_TBL_*tablename*** naming convention.

The remaining FIMSWeb tables are referred to as lookup tables. These tables contain the picklist values used within FIMSWeb, such as usage code, MARS asset type, and hazard category. All FIMSWeb lookup tables use the **FIMS_TBL_LU_*tablename*** naming convention.

The following lists the FIMSWeb master tables and lookup tables. Take note of the naming conventions.

Master Tables

FIMS_TBL_ARCHIVE
FIMS_TBL_ARCHIVE_MAINT
FIMS_TBL_AREA
FIMS_TBL_BUILDING
FIMS_TBL_CAP_IMPROVE
FIMS_TBL_DEF_MAINT
FIMS_TBL_GSA_ASSIGNED
FIMS_TBL_INGRANT
FIMS_TBL_LAND
FIMS_TBL_MAINT_HISTORY
FIMS_TBL_OCCUPANT
FIMS_TBL_OSF
FIMS_TBL_OUTGRANT
FIMS_TBL_PROPERTY
FIMS_TBL_SITE
FIMS_TBL_SITE_MAINT

Lookup Tables

FIMS_TBL_LU_ACQ_METHOD
FIMS_TBL_LU_COMM_STATUS
FIMS_TBL_LU_CONDITION_CODE
FIMS_TBL_LU_CONGRESS_DISTRICT
FIMS_TBL_LU_DIMS
FIMS_TBL_LU_EXCESS_IND_CODE
FIMS_TBL_LU_FIELD_OFFICE
FIMS_TBL_LU_FIS_ASSET_TYPE
FIMS_TBL_LU_FIS_REPORT_SOURCE
FIMS_TBL_LU_GEO_LOC_CITY
FIMS_TBL_LU_GEO_LOC_COUNTY
FIMS_TBL_LU_GEO_LOC_STATE
FIMS_TBL_LU_HAZARD_CODE
FIMS_TBL_LU_JUST_CODE
FIMS_TBL_LU_LANDLORD_FUND_PGM
FIMS_TBL_LU_LAND_OWNERSHIP
FIMS_TBL_LU_METERS
FIMS_TBL_LU_MO_CONTRACTOR
FIMS_TBL_LU_MODEL_BLDG
FIMS_TBL_LU_OWNLSE
FIMS_TBL_LU_PROGRAM_OFFICE
FIMS_TBL_LU_RESPON_HQ_PROGRAM
FIMS_TBL_LU_RPV_MODEL
FIMS_TBL_LU_SEIS_EXEMPT
FIMS_TBL_LU_SITE_FACTOR
FIMS_TBL_LU_STATE
FIMS_TBL_LU_UFAS_EXEMPTION
FIMS_TBL_LU_USAGE_CODE

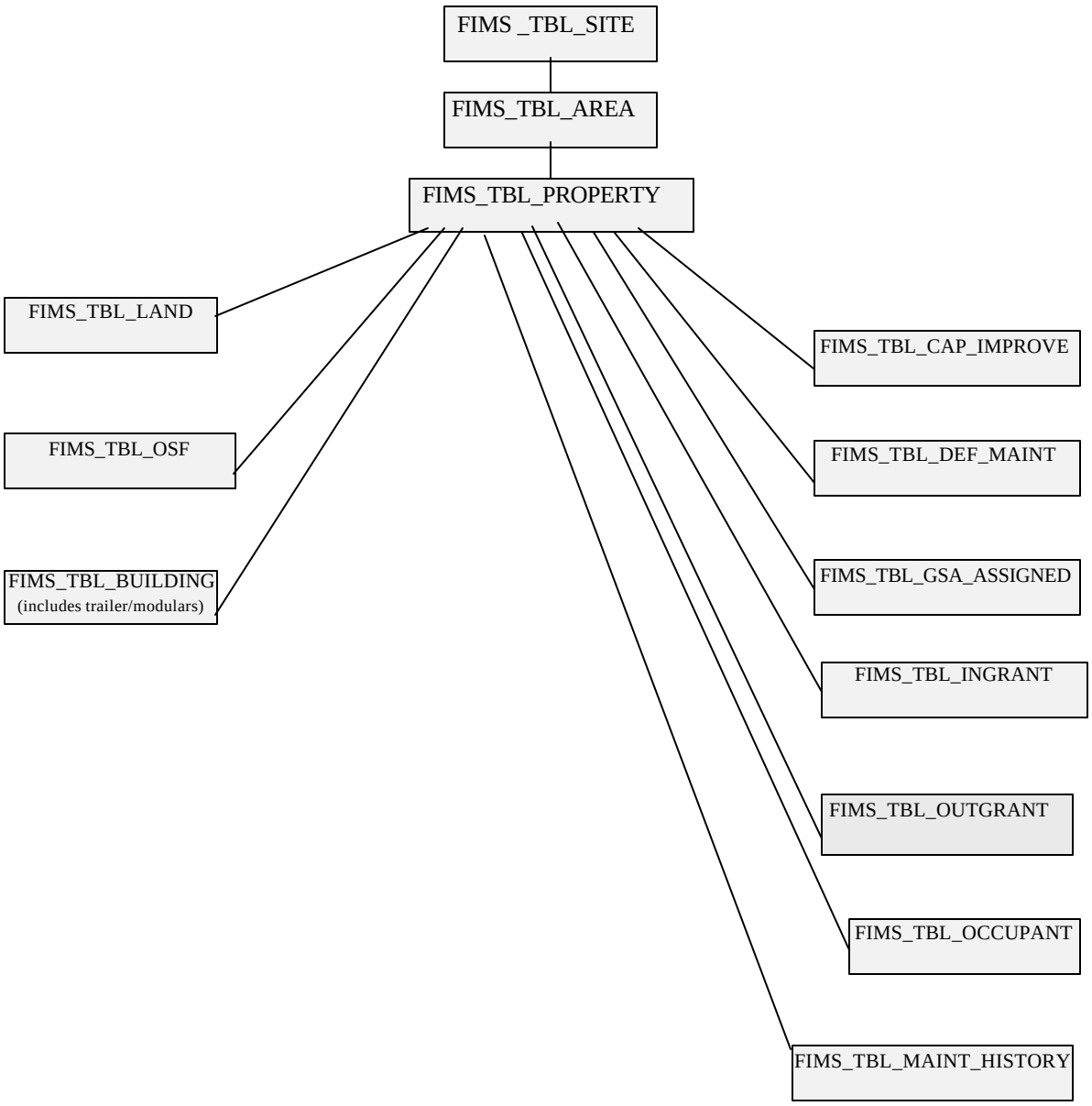
FIMSWeb Master Tables vs. FIMSWeb Windows

The following provides a crosswalk identifying which FIMSWeb master tables contain the data that resides on the respective FIMSWeb windows.

FIMSWeb Master Table	FIMSWeb Windows
FIMS_TBL_ARCHIVE FIMS_TBL_ARCHIVE_MAINT	Archive
FIMS_TBL_AREA	Area Info
FIMS_TBL_BUILDING	Building Info, Handicap, Dimensions (Bldg and Trailer), Condition, Trailer Info, RPV
FIMS_TBL_CAP_IMPROVE	Cap Adjust
FIMS_TBL_DEF_MAINT	Maintenance
FIMS_TBL_GSA_ASSIGNED	GSA Assigned
FIMS_TBL_LAND	Land Info
FIMS_TBL_INGRANT	Ingrant 1, Ingrant 2
FIMS_TBL_MAINT_HISTORY	Maintenance History
FIMS_TBL_OCCUPANT	Occupants
FIMS_TBL_OSF	OSF Info, Dimensions (OSF)
FIMS_TBL_OUTGRANT	Outgrant
FIMS_TBL_PROPERTY	Property Info, Notes
FIMS_TBL_SITE	Site Info, GSA Report
FIMS_TBL_SITE_MAINT	Site Maint History

FIMSWeb Database Table Relationships

The following diagram illustrates the relationships between the FIMSWeb master (data) tables.



15. Working with Access

In this section we will open Microsoft Access and the FIMSWeb database. We will discuss the database window and explore the help features of Access 2000. We will conclude by closing the FIMSWeb database and exiting Access.

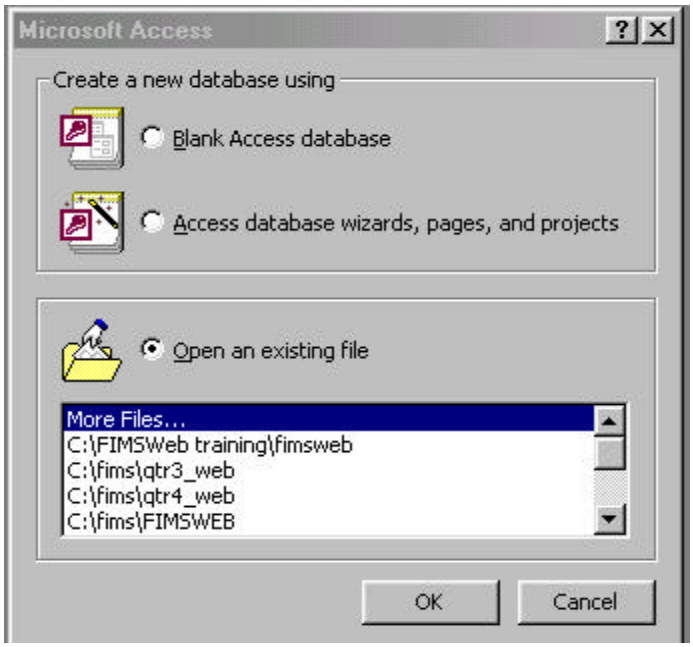
Starting Microsoft Access

To start Microsoft Access, click the Microsoft Access button on your Office toolbar.

Opening the FIMSWeb Database

An Access database is a collection of objects, not just a single table of data. One database contains all the tables as well as queries and reports that help you use the information in the database.

Upon opening Access, the Microsoft Access dialog box appears as shown below.



To open a database use the following procedure:

1. Make sure the **Open an existing file** radio button is selected. Then double-click a database from the list of the most recently used files or double-click **More Files...** to locate a database.
2. If **More Files...** was selected, the Open dialog box will appear and list all the files of type Data Files (*.mdb, …). If necessary, change the **Look in:** selection to locate the FIMSWeb database. The suggested default installation location for your FIMSWeb database was c:\FIMS. If you do not have a c:\FIMS folder, you will have to determine where the FIMSWeb database was stored on your PC. Double-click the database file to open the database.

The FIMSWeb Microsoft Access database is described as follows:

fimsweb.mdb This Access 2000/2002 database is directly linked read-only to the FIMSWeb Oracle data on the FIMSWeb database server and is used to create custom queries and reports.

Using the Toolbar

Across the top of the screen is a group of buttons which are referred to as a toolbar. Toolbars provide you with shortcuts for the most commonly used commands, such as Open Database, Save, and Print. The picture on each button represents the button's function. To display the name of a button, place the mouse pointer over the button. The Screen Tips name will be displayed below the pointer.

If a button is unavailable, it appears dimmed. This identifies that the button's function is not applicable for the current task.

Microsoft Access Help Features

Office Assistant

Like other Microsoft products, Access has an Office Assistant to assist you while working in Access. The Office Assistant can answer your questions, offer tips, and provide Help for a variety of features specific to Access.

The Office Assistant can display any of the following:

- tips to point out how to use the features or keyboard shortcuts in the program more effectively
- help with wizards
- suggested Help relevant to the specific task you are performing

When the Office Assistant appears, it routinely ask how it can help you. You overtype the field which reads "Type your question here...", then click **Search**.

The Office Assistant returns with various options. And the list continues if you click **See more...**. Choose an item from the List to get detailed, step-by-step instructions for performing a task.

To display the Office Assistant at any time when working with Access:

 Click the **Microsoft Access Help** button on the toolbar.

You can drag the Office Assistant to any location and resize the Office Assistant window between large and small by dragging the border.

Click the  **Close** button in the top right-hand corner of the window to close the help window.

"What's This?"

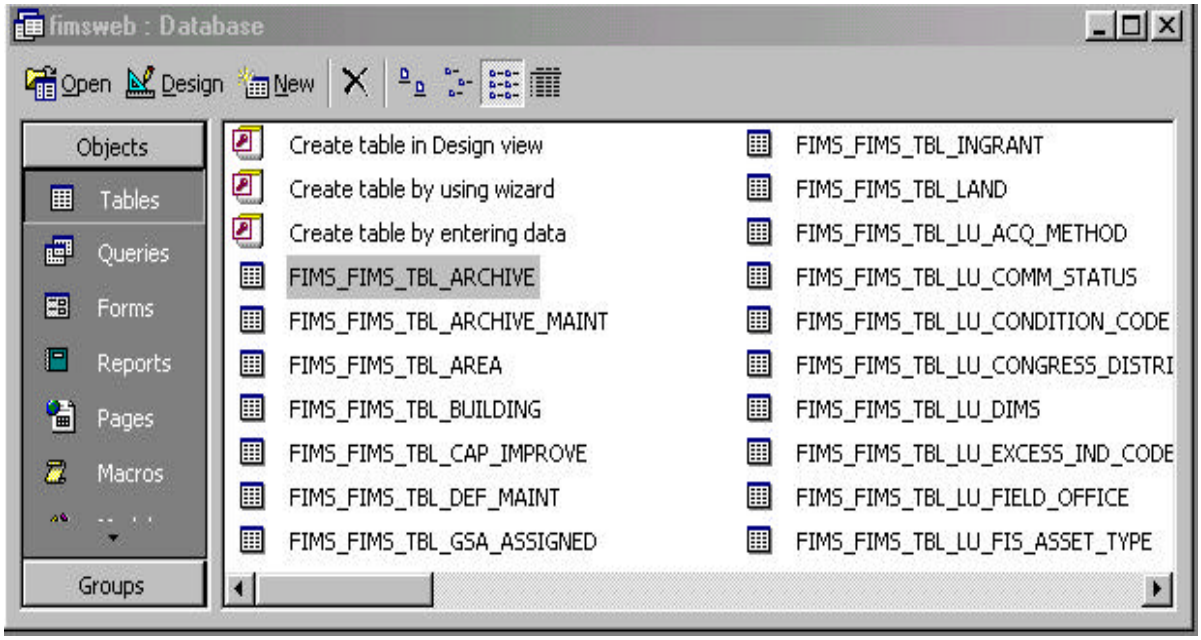
Access can often determine what you need help with by what your mouse is pointing to on the screen. This help is referred to as Context Sensitive Help.

For "What's This?" help perform the following:

1. Select **Help** from the File menu, then click **What's This?** The mouse pointer will change to the pointer plus a question mark.
2. Click the item you desire help on.

Understanding the Database Window

Once you open an Access database, the Database window is displayed as shown. The database window operates as a command center that lists all of the parts of your database known as objects and contains buttons giving you direct access to each of them.



Along the left side of the Database window are a series of buttons. When working with the FIMSWeb database, you will use the three buttons defined below.

Tables	Lists the FIMSWeb database tables. When a table is selected, Access displays records from the table in row and column format.
Queries	Lists all the queries that have been created and saved. Queries allow you to select records based on criteria and to control the display of information, including sorting order and selective fields.
Reports	Lists all the report formats that have been created and saved. Reports allow you to format, calculate, print, and summarize selected data.

To view a database object (Tables, Queries, or Reports):

1. Click the appropriate tab to display a list of the associated objects.

The various buttons at the top of the database window are used to perform the following actions:

New	To create a new object of the type selected. For example, to create a new query, click the Queries button and then click the **New** button.
Open	To display an existing object. Use this button to open an existing table or to run an existing query.
Preview	To display an existing report object. Use this button to run and view a report online.

To change the layout of the object. Use this button to modify an existing query or report.

Closing the FIMSWeb Database

When you are finished working with a database and want to close it, you must first access the Database window. The window will appear once you close any table, query, or report that is open.

To close a database:

1. Click the **Close** button of the Database window.

Exiting Access

Once you have completed the work you are doing within Access, you can exit Access and return to the Windows desktop.

To exit Access:

1. Click the Close button on the Microsoft Access window.

16. Creating Queries

A query is a question about information in your database. You design a query to select records that meet specific criteria. A query lets you select which records and data fields are displayed and their sort order. The selected records are a subset of the database.

When you create a query, you designate:

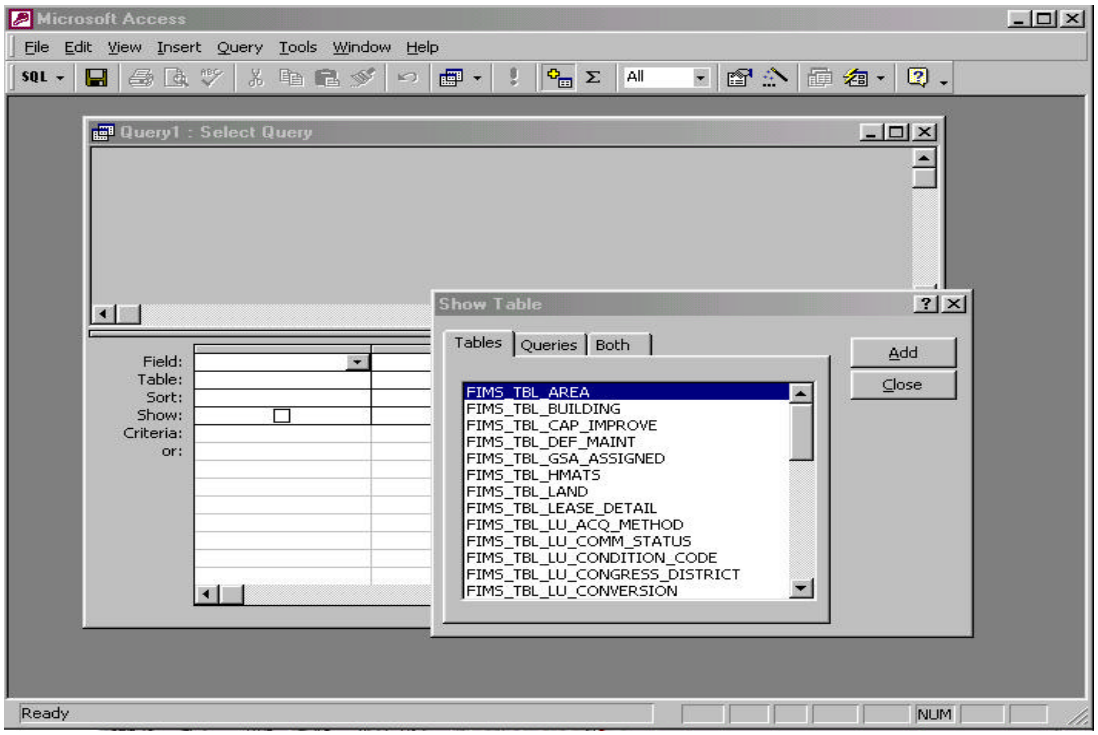
- Tables from which to display information
- Data Fields to display
- Criteria used to select records
- Sort order of the retrieved records

Designing a Query

To design a query, open the database and click the **Queries** button.

To create a new query perform the following:

1. Click the **New** button to design a query.
2. Double-click **Design View** from the New Query dialog box. The Show Table dialog box is displayed as shown. This box lists the tables in the database, as well as any existing queries or both (tables and queries) for that database depending on the tab selected.

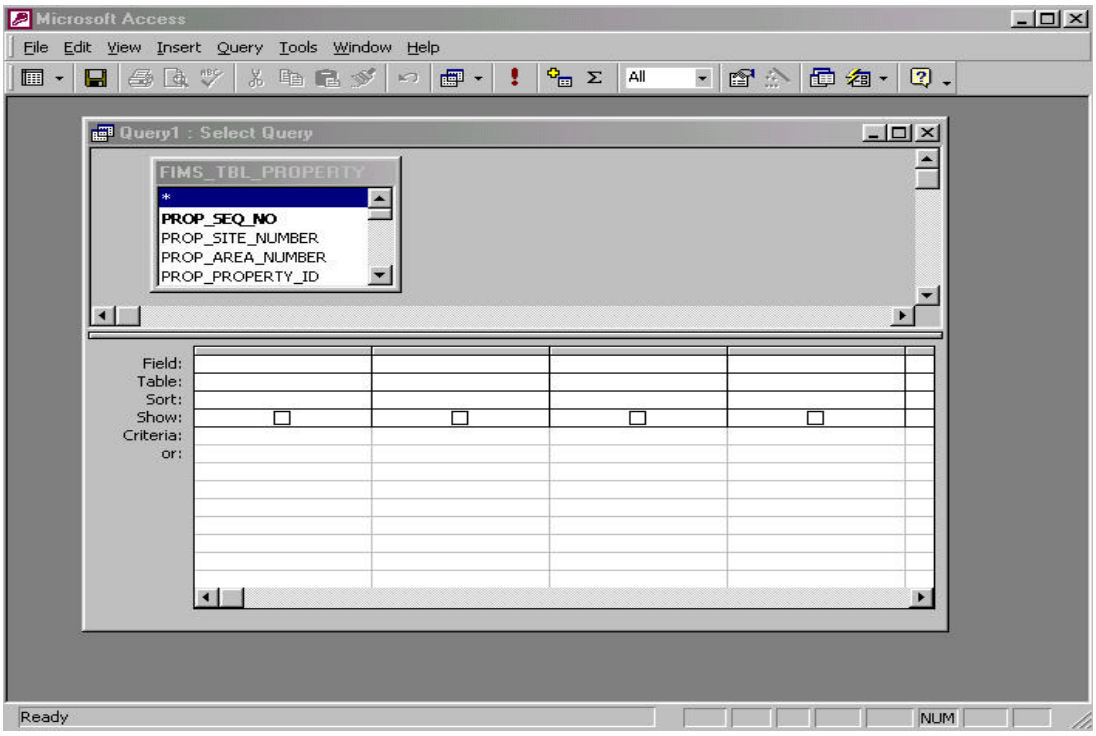


3. Double-click a table to use for the query from the list.
4. Click the **Close** button after all tables have been selected to close the Show Table dialog box.
5. Resize the table by clicking and dragging the right side border so that the field names are in full view.

After closing the Show Table dialog box, Access displays the query window in Design view, showing the table structure and a design grid in which you designate the desired data fields. The window is titled **Select Query**, because you use the query to select records.

Selecting Fields

The upper half of the select query window contains each selected table and its associated data fields. You must select data fields from the table and move them to the design grid to format a query.



Perform one of the following to select the data fields to format your query:

Click on a data field and drag it to a column in the design grid.

- or -

Double-click the data field name to add it to the design grid.

- or -

Click a cell in the Field row and click the picklist arrow, then select the data field from the list.

- or -

Use **[Ctrl+Click]** on different data fields to select multiple nonadjacent data fields and drag them to the design grid.

- or -

Use **[Shift+Click]** to select a group of adjacent data fields and drag them to the design grid.

Viewing Field Names in the Grid

You may have noticed that the entire data field name is not always visible in the design grid column.

To view a data field name in the design grid:

1. Position the mouse pointer over the right border of the column heading, the mouse pointer will change to a bar with arrows pointing left and right. Double-click to auto adjust the column width.

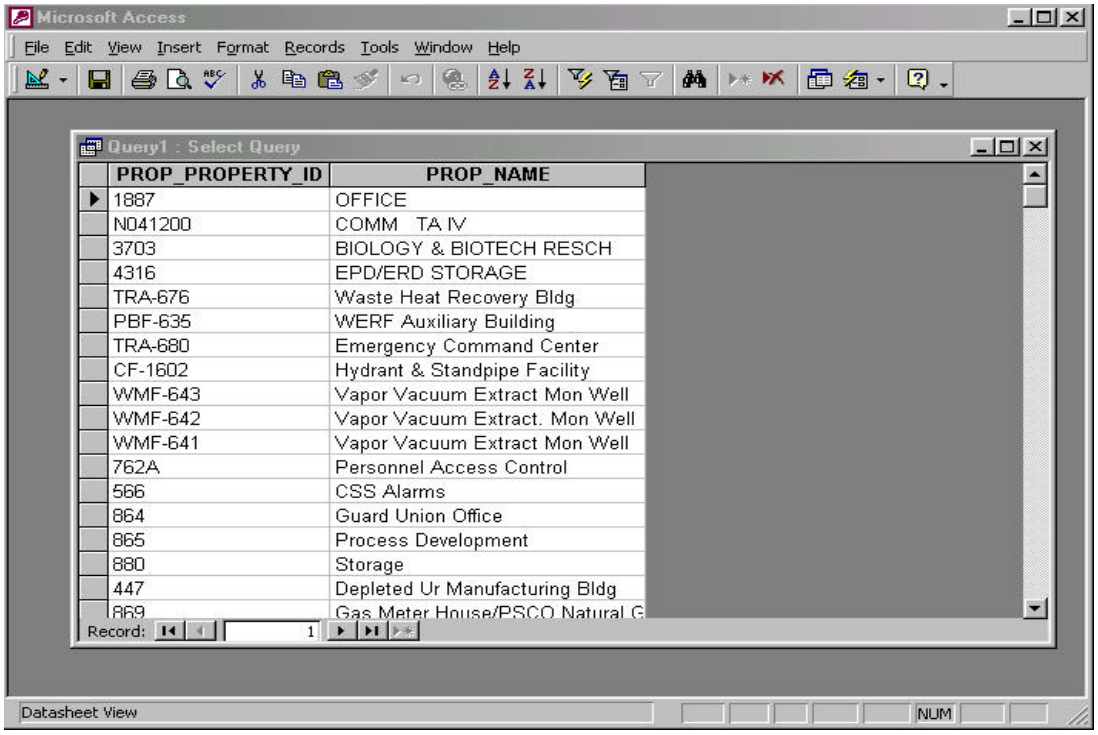
Running a Query

When you have completed the design of your query, you must run the query to retrieve and format the data from the database.

To run a query:

Click the **Run** button on the toolbar.

The output will appear in Datasheet view as shown.



To change the query design, click the **Design View** button on the toolbar. The design grid will reappear. Modify the query as desired.

Saving a Query

When you save a query, the query design is saved, not the output itself.

You cannot save a query with the same name as a table. For the first query, Access will suggest the default name **Query1**. If you accept the default, Access will increment the number for additional queries. You should however, consider assigning a more meaningful name to your queries.

To save a query design perform the following:

1. Click the  **Save** button on the toolbar.
2. Type a Query Name: and click the **OK** button.

To close the query window perform the following:

1. Click the  **Close** button on the query window.
2. If you are prompted to save changes, select **Yes** or **No**, as appropriate. Type a query name, if prompted, to save the query.

Exercise 7: Create a New Query (Select Fields)

Scenario: Select fields to include in a new query of all property records.

Open a Database

1. Open  Microsoft Access and the **FIMSWeb** database if not already open.

New Query

2. Click the **Queries** button. Click the **New** button to access the New Query dialog box.
3. Double-click **Design View**.
4. Double-click the **FIMS_TBL_PROPERTY** table. Remember the tables are listed in alphabetical order. Click the **Close** button.
5. Resize the **FIMS_TBL_PROPERTY** table so that the field names are in full view.
6. Double-click the following fields to include in the query:

   PROP_SITE_NUMBER
   PROP_AREA_NUMBER
   PROP_PROPERTY_ID
   PROP_NAME

7. Click the  **Run** button on the toolbar.
8. Click the  **Save** button on the toolbar. Type **PROPERTY REPORT** and click the **OK** button.
9. Click the  **Close** button on the query window. Notice your new query is now displayed in the Queries list.

Printing a Query

You can print the results of a query after you have run the query. The query will print in datasheet format.

To print the query results:

While in the datasheet view, click the  Print button on the toolbar.

This is the fastest way to produce printed results. The FIMSWeb field names are used to label the data and the query name is used as the Title. You can view the layout of your query as it will appear when printed on paper by using the **Print Preview** feature.

To view the query in Print Preview:

1. While in the datasheet view, click the  Print Preview button on the toolbar.
2. To adjust the margins or page orientation, click the right mouse button and click **Page Setup...**. Change the settings on the Margins and/or Page tabs and click the **OK** button.
3. To Print directly from Print Preview, click the  **Print** button on the toolbar.
4. Click the **Close** button on the toolbar to close Print Preview. If you click the  **Close** button on the window you will lose your query unless you save it when prompted.

Sorting Records

When you run a query, the records appear in the same order in which they appear in the database table. To change the order of the retrieved records, you can sort the records.

The query can be sorted on more than one data field. Access will sort the data fields from left to right as they appear in the design grid. To change the order in which the data fields appear, select and place data fields individually in the design grid in the desired order.

Procedure for sorting records on one data field:

1. Click the **Sort** row cell under the data field by which you choose to sort.
2. Click the picklist in the **Sort** row to display sort options. Select a sort order (**Ascending** or **Descending** or **not sorted**) in the **Sort** row under the data field.
3. Click the  **Run** button on the toolbar to run the query.

Procedure for sorting records on more than one data field:

1. Arrange the data fields in the design grid in the order in which you want them sorted, reading left to right.

2. Click the **Sort** row cell under the data field by which you choose to sort.
3. Click the picklist in the **Sort** row to display sort options. Select a sort order (**Ascending** or **Descending** or **not sorted**).
4. Repeat steps 2-3 for the next data field by which to sort.
5. Click the  **Run** button on the toolbar to run the query.

Exercise 8: Create a New Query (Sort Records)

Scenario: Create a new query of Property information. Sort the resulting records by site, area, and property id.

1. Ensure the **Queries** button is selected. Click the **New** button to access the New Query dialog box.

2. Double-click **Design View** to access the Show Table dialog box.

3. Double-click on the **FIMS_TBL_PROPERTY** table. Click the **Close** button.

4. Resize the **FIMS_TBL_PROPERTY** table so that the field names are in full view.

5. Select the following fields to include in the query:

   PROP_SITE_NUMBER
   PROP_AREA_NUMBER
   PROP_PROPERTY_ID
   PROP_NAME
   PROP_PROPERTY_TYPE
   PROP_OWNED_INGRANT
   PROP_EXCESS_IND
   PROP_ASSET_TYPE

6. Click in the Sort row cell below the **PROP_SITE_NUMBER** field. Click the picklist button. Click on **Ascending** to sort the site number in ascending order.

7. Click in the Sort row cell below the **PROP_AREA_NUMBER** field. Click the picklist button. Click on **Ascending** to sort the area number in ascending order. Repeat for the **PROP_PROPERTY_ID** field to sort it in ascending order also.

8. Click the  **Run** button on the toolbar.

9. Click the  **Save** button on the toolbar. Type **PROPERTY INFORMATION BY SITE** and click the **OK** button.

10. Click the  **Close** button on the query window.

Deleting a Query

Saved queries which are no longer needed can be deleted.

To delete a query:

1. Click the **Queries** button.
2. Click the query name in the Database window that you wish to delete.
3. Click the right mouse button and click **Delete**. Respond **Yes** to delete the query.

Using an Existing Query

After you save a query, the query can be rerun very quickly. You may also bring the query back into the Design view for further editing.

To work with an existing query perform the following:

1. Click the **Queries** button.
2. Double-click the name of the query to run the query

   - or -

   Click the name of the query and click the **Design** button to modify the query in Design view.

Inserting Fields

In the design grid, you can insert data fields in the grid between those already specified.

To insert a data field:

Click and drag the data field to the column it is to occupy. The data field originally in that column, and other data fields on its right, will shift to the right accordingly.

Deleting Fields

In the design grid, you can delete data fields from the grid. When you delete a data field, the columns on the right shift over to fill in the space.

To delete a data field:

1. Point to the top of the column (the small rectangle just above the field name) until a downward pointing solid black arrow appears and click the mouse. The column will appear highlighted.
2. Press **[Delete].**

Using Criteria to Select Records

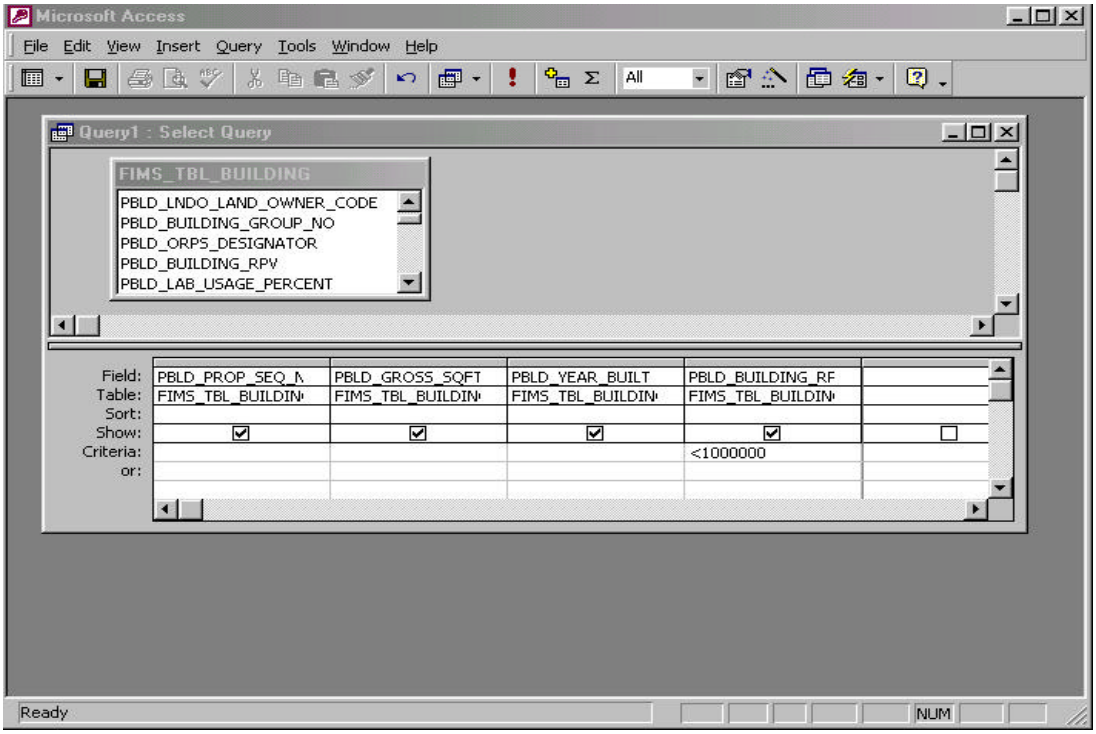
By specifying criteria or setting data restrictions, you can affect the results of your query. Rather than selecting every record in a table, you can select records based on

specific criteria such as showing only the leased buildings or all land acquired after a specific date. Records not meeting the selection criteria are not deleted from the database; they just do not appear in the output.

After you designate each of the data fields you want to display, you will enter the criteria for selecting specific records. Do this in the row labeled **Criteria** in the design grid.

To select records that meet a single value, enter the value in the **Criteria** row. For instance, to locate records for DOE owned properties, type the letter **O** in the **Criteria** row under the column containing the data field **Prop_Owned_Ingrant**.

To enter a word(s), just type the word(s) in the **Criteria** row and press **[Enter]**. Access will insert double quotation marks around the word(s) for you.



You can use an operator in your criteria by typing it directly into the design grid. For example, to locate records for buildings with RPV costs under $1,000,000, type <1000000 in the **Criteria** row under the column containing the data field **PBLD_BUILDING_RPV**.

The In operator may be used to specify a list of values. For example, to retrieve building records for two sites, type In ('01008','01003') in the Criteria row under the column containing the data field **PROP_SITE_NUMBER**.

The Between operator allows you to specify a range of values, such as a range of lease expiration dates or a range of building years built. The following format should be used when using the Between operator:

Between value1 **and** value2

Microsoft Access has a wildcard character (*) that can be used in text phrases to represent any number of unknown characters. For example, *water* will find any

values which contain "water" anywhere in the data field regardless of what characters are before or after "water".

The following examples show how you can enter operators and how they are displayed in Access:

When you enter	Access displays	And retrieves records where
Nevada	"Nevada"	Value is Nevada
<1000000	<1000000	Value is less than $1,000,000
<=1000000	<=1000000	Value is less than or equal to $1,000,000
<>Nevada	<>"Nevada"	Value is everything except (or not equal to) Nevada
=1000000	=1000000	Value is $1,000,000
>1000000	>1000000	Value is greater than $1,000,000
>=1000000	>=1000000	Value is greater than or equal to $1,000,000
In ('001','002','003')	In ('001','002','003')	Value is 001 or 002 or 003
Between 1/1/98 And 1/31/98	Between #1/01/98# And #1/31/98#	Date values are between 1/1/98 and 1/31/98, inclusive
Like *tower*	Like "*tower*"	Value appears anywhere in the field (water tower, storage tower, towering structure)

When designating your selection criteria you can create "and" and "or" conditions. These conditions occur when you enter multiple selection criteria values for one or more data fields in the design grid. The following defines the use of the "and" and "or" conditions:

And When you have criteria for more than one data field in the ***same Criteria row***, a record must meet ***all of the criteria*** to be included in the result set. Criteria for more than one data field in the same Criteria row tells Access, "Include the record if it has the specified values in this data field and in that data field." For example, you can build a query that includes only those properties that were acquired after 1990 and cost more than 1 million dollars.

Or On the other hand, when you have one data field with multiple criteria in the ***same Criteria column***, a record is included in the result set if it meets ***any one of the criteria***. Multiple criteria for one data field tells Access, "Include the record if it has this value or that value in this data field." For example, you can build a query that includes properties that are leased by DOE or leased by a contractor.

Exercise 9: Create and Print a New Query (Use Range Operator)

Scenario: Create a new query of properties where excess year is from 2003 through 2008 and acquisition cost greater than $25,000 for the ORNL site.

1. Ensure the **Queries** button is selected. Click the **New** button to access the New Query dialog box.

2. Double-click **Design View** to access the Show Table dialog box.

3. Double-click on the **FIMS_TBL_PROPERTY** table. Click the **Close** button.

4. Resize the **FIMS_TBL_PROPERTY** table so that the field names are in full view.

5. Select the following fields to include in the query:

   PROP_SITE_NUMBER
   PROP_PROPERTY_ID
   PROP_NAME
   PROP_PROPERTY_TYPE
   PROP_OWNED_INGRANT
   PROP_USAGE_CODE
   PROP_ACQ_COSTS
   PROP_TOTAL_IMPROVE_COST
   PROP_EXCESS_YR

6. Click in the Sort row cell below the **PROP_SITE_NUMBER** field. Click the picklist button. Click **Ascending** to sort the site number in ascending order.

7. Click in the Sort row cell below the **PROP_PROPERTY_ID** field. Click the picklist button. Click **Ascending** to sort the property id in ascending order.

8. Click in the Criteria row cell below the **PROP_SITE_NUMBER** field. Type **10004** to select records for the Oak Ridge National Lab (ORNL) site.

9. Click in the Criteria row cell below the **PROP_OWNED_INGRANT** data field. Type **O** (capital letter O) to select records for DOE owned only.

10. Click in the Criteria row cell below the **PROP_EXCESS_YR** field. Type **between 2003 and 2008** to request a list of all properties that were excessed between 2003 and 2008.

11. Click in the Criteria row cell below the **PROP_ACQ_COSTS** field. Type **>25000** to request a list of DOE owned properties for the ORNL site with an acquisition cost > $25,000 and that were excessed between 2003 and 2008.

12. Click the  **Run** button on the toolbar. Resize the **PROP_NAME** column so that the entire description is visible.

13. Click the  **Save** button on the toolbar. Type **PROPERTIES EXCESSED FROM 2003 - 2008** and click the **OK** button.

14. Click the  **Print Preview** button on the toolbar to preview the query print results. With the cursor inside the Preview window, click the right mouse button, click **Page Setup...**, then click the **Page** tab and change the Orientation to Landscape. Click the **Margins** tab and change the **Left** and **Right** margins to .25 inches. Click the **OK** button. **Zoom** using the magnify glass. Click the **Close** button on the toolbar.

15. Click the  **Close** button on the query window.

NOTE: The formatting changes that were made in step 14 are not saved with the query. Every time the query is opened, the print formatting has to be setup.

Exercise 10: Edit an Existing Query (Match a Value)

Scenario: Edit an existing query of properties and request information for a specific HQ program office.

1. Click the **PROPERTY REPORT** query from the database window and click the **Design** button.

2. Add the following field to the query:

   PROP_PROPERTY_TYPE
   PROP_OWNED_INGRANT
   PROP_PROGRAM

3. Click in the Criteria row below the **PROP_PROGRAM** data field. Type **NNSA** to select records for the National Nuclear Security Administration program office.

4. Click the Criteria row below the **PROP_PROPERTY_TYPE** data field. Type **B** to select only building records.

5. Click the Criteria row below the **PROP_OWNED_INGRANT** data field. Type **O** (capital letter o) to select only DOE owned records.

6. Click the  **Run** button on the toolbar.

Modify the query

7. Click the  **Design View** button on the toolbar.

8. Click in the Criteria row below the **PROP_PROGRAM** data field. Replace the existing entry with **IN ('NNSA','SC','EM')** to select records for the National Nuclear Security Administration, Science, and Environmental Management program offices.

9. Click in the Sort row cell below the **PROP_SITE_NUMBER** field. Click the picklist button. Click on **Ascending** to sort the site number in ascending order. Repeat this step to also sort **PROP_AREA_NUMBER** and **PROP_PROPERTY_ID** in ascending order.

10. Click the  **Run** button on the toolbar.

11. To save our modified query under a new name and keep the existing query, select **File, Save As...**. Type **PROPERTY RECORDS BY HQ PROGRAM** in the Save Query 'Property Report' To: box. Click the **OK** button.

12. Click the  **Close** button on the query window. Notice the two separate queries in the Database window, our original query PROPERTY REPORT and our modified query PROPERTY RECORDS BY HQ PROGRAM.

Retrieving Data from More Than One Table

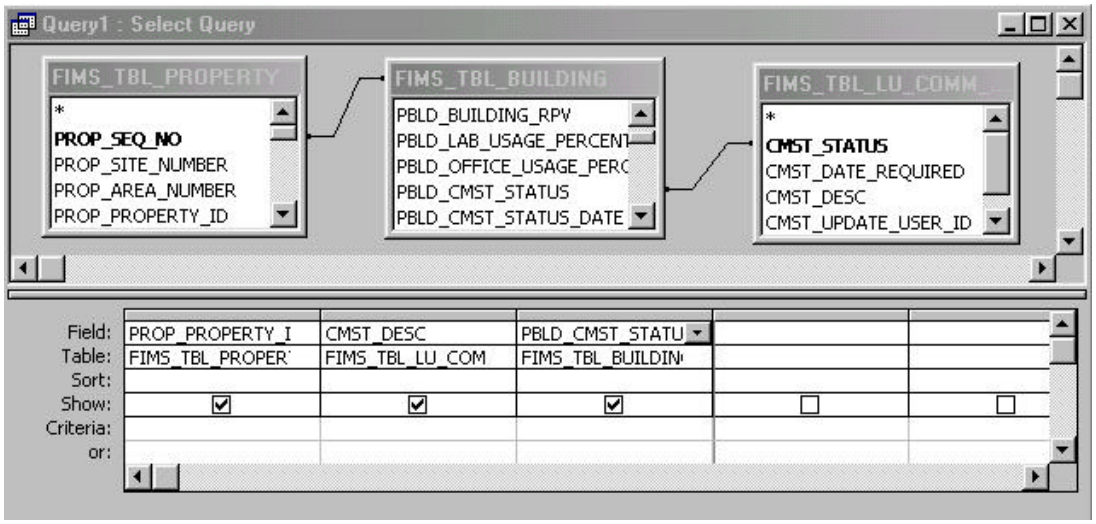
All of the queries designed so far have used a single table. Sometimes, however, you need to retrieve information from more than one table in a database. For example, in the **FIMSWeb** database, building gross square feet is in the **Building** table, and property names are in the **Property** table. For a list of building gross square feet and property names, you must use both tables in the query. The process of retrieving data from both tables to create a new subset of information is called "joining".

The same concept of joining tables also applies to lookup tables. Frequently the description or name, rather than the code, for a data field is to be displayed on a report or query. The code data field in the master table is joined to the code data field in the lookup table so the corresponding information can be retrieved.

Joining Tables for Queries

If you want to retrieve information from two tables, you link them together in the query window. This link applies only to that query.

When you create a new query, just select all the tables that you want to query. You can also add tables to existing queries from the Query window without starting the query over again.



Tables can be deleted from queries using the Query window. When a table is deleted from a query, all associated data fields are also deleted from the design grid.

To add tables to an existing query:

1. With the query open in Design view, click the  **Show Table** button on the toolbar.
2. Double-click the table to be inserted. Repeat this step for each table to be included in the query.
3. Click the **Close** button on the Show Table dialog box.

To delete a table from a query:

1. With the query open in Design view, select the table.
2. Press **[Delete]**. All related data fields will also be removed from the query.

Using Joins

When you create a query using two related tables, you must join the tables to retrieve the related data for your query. Only records that have matching data in the joined fields of both tables are selected for your query results.

The FIMSWeb database has joins already associated with specific tables. As you select tables for your query, the join lines will appear connecting the appropriate related tables. This feature eliminates some of the joining process, however there may be occasions where you have to physically place the join between the two related tables. The procedures below will step you through the process.

To create a join between two related tables in a query:

1. Display a query in Design view.
2. Add tables as described above.
3. Click and drag the common field from one table to the related field in another table.

To removing a join between two related tables in a query:

1. Click the join line, the line will become bold.
2. Press [Delete].

Exercise 11: Create a New Query (Joining Three Tables)

Scenario: Join fields from three tables to include in a new query of building usage information.

1. Ensure the **Queries** button is selected. Click the **New** button to access the New Query dialog box.

2. Double-click **Design View** to access the Show Table dialog box.

3. Double-click on the **FIMS_TBL_PROPERTY**, **FIMS_TBL_BUILDING**, and **FIMS_TBL_LU_USAGE_CODE** tables. Click the **Close** button.

4. Move and resize the tables so that the field names are in full view.

5. Notice the join line between the Property and Building tables has been created.

6. Click and drag **PROP_USAGE_CODE** from the FIMS_TBL_PROPERTY table to **USCD_USAGE_CODE** in the FIMS_TBL_LU_USAGE_CODE table. Notice the join line created between the two tables.

7. Double-click the **PROP_SITE_NUMBER**, **PROP_PROPERTY_ID, PROP_NAME, PROP_PROPERTY_TYPE,** and **PROP_OWNED_INGRANT** data fields from the **FIMS_TBL_PROPERTY** table to include in the query.

8. Double-click the **PBLD_GROSS_SQFT** and **PBLD_NET_OCC_SQFT** data fields from the **FIMS_TBL_BUILDING** table to include in the query.

9. Double-click the **USCD_LONG_DESC** data field from the **FIMS_TBL_LU_USAGE_CODE** table to include in the query.

10. Click in the Sort row cell below the **PROP_SITE_NUMBER** data field. Click the picklist button. Click on **Ascending** to sort the property id in ascending order. Repeat for the **PROP_PROPERTY_ID** to sort it in ascending order.

11. Click in the Criteria row cell below the **PROP_SITE_NUMBER** field. Type **10004** to select records for the Oak Ridge National Lab (ORNL) site.

12. Click in the Criteria row cell below the **PROP_PROPERTY_TYPE** data field. Type **B** to select building records only.

13. Click in the Criteria row cell below the **PROP_OWNED_INGRANT** data field. Type **O** (capital letter O) to select records for DOE owned only.

14. Click the  **Run** button on the toolbar. Resize the PROP_NAME and USCD_LONG_DESC columns to make them wider so that the entire field is visible. Resize the remaining columns to make them smaller.

15. Click the  **Save** button on the toolbar. Type **BUILDING USAGE INFORMATION** and click the **OK** button.

16. Click the  **Print Preview** button on the toolbar to preview the query results. Click the right mouse button, click **Page Setup...**, then click the **Page** tab and change the Orientation to Landscape. Click the **OK** button. If the report is too wide for one page, you can resize the columns again or you can change the left and right margins using **Page Setup…, Margins.** Use the **Zoom** feature to view the data. Click the **Close** button on the toolbar.

17. Click the  **Close** button on the query window.

Using Hidden Fields

You can use a data field to select and sort records without actually displaying the data field in the query results. This is most useful when all of the records meet the same criteria. For example, when creating a query of all properties that are owned by DOE, it is not necessary to display the PROP_OWNED_INGRANT data field in the query; since the query will display the same value for all properties.

To Hide a data field:

1. Enter the criteria for the data field in the Criteria row of the query design grid.
2. Click the **Show** box to remove the ✓.

Query Formatting Options

The following procedures will provide you with the processes to create custom column headings, format numeric and date data fields, and change the print font size. Also remember the name you saved your query with prints as the title. The query can always be renamed.

To rename a query:

1. In the Database window click the query you wish to rename.
2. Click the left mouse button again to edit the query name. Type in a new name.

To create custom column headings:

1. With your query open in Design view, click on a column in the design grid that you want to create a column heading for.
2. Click the  **Properties** button on the toolbar. The Field Properties dialog box opens.
3. In the **Caption** field, type the column heading you desire on the query output.
4. Without closing the Field Properties dialog box, click on the next column in the design grid where you want to create a column heading. Or to exit, click the  **Close** button of the Field Properties dialog box.

Note: Be careful not to click in the Show row cell, it will hide the data field and change the Field Properties dialog box. Just click the Show box to get the Field Properties dialog box back.

5. Repeat steps 3 and 4 to create all desired column headings.

To format numeric and date columns:

1. With your query open in Design view, click on the column in the design grid that you want to format.

2. Click the  **Properties** button on the toolbar. The Field Properties dialog box opens.
3. Click the **Format** field and select an output format from the picklist. For numeric data types, you may also specify the number of decimal places to display using the **Decimal Places** field.
4. Without closing the Field Properties dialog box, click on the next column in the design grid that you want to format. Or to exit, click the  **Close** button of the Field Properties dialog box.
5. Repeat steps 3 and 4 to format all desired columns.

To change the print font size:

1. Click the  Run button to put your query in datasheet view. Select **Format, Font...** from the File menu. Choose a **Font**, **Font style**, and **Size**, then click the **OK** button.

View your query in Datasheet view to see your formatting changes.

Remember you can always change the page orientation. In  Print Preview click the right mouse button, click **Page Setup...**, then click the **Page** tab and choose portrait or landscape.

Exercise 12: Edit an Existing Query and Add Column Headings and Formatting

Scenario: Edit an existing query of building usage information and format the column headings and data.

1. Click the **BUILDING USAGE INFORMATION** query from the database window and click the **Design** button.

2. Click in the **Show** box below the **PROP_PROPERTY_TYPE** and **PROP_OWNED_INGRANT** data fields to hide the field contents in the generated query.

3. Click the **PROP_SITE_NUMBER** column (anywhere but the Show row). Click the  **Properties** button on the toolbar. In the Field Properties dialog box, type **Site** in the Caption field. Don't close the Field Properties dialog box.

4. Click the next column **PROP_PROPERTY_ID**. In the Caption field, type **Prop ID**.

5. Click the next column **PROP_NAME**. In the Caption field, type **Prop Name**.

6. Click the **PBLD_GROSS_SQFT** column. In the Caption field, type **Gross Sqft**. Click the Format field and then click the picklist arrow. Click **Standard**. Click the Decimal Places field and click the picklist arrow. Click **0**.

7. Click the next column **PBLD_NET_OCC_SQFT**. In the Caption field, type **Net Occup Sqft**. Click the Format field and then click the picklist arrow. Click **Standard**. Click the Decimal Places field and click the picklist arrow. Click **0**.

8. Click the next column **USCD_LONG_DESC**. In the Caption field, type **Bldg Usage**.

9. Click the  Close button on the Field Properties dialog box.

10. Click the  Save button on the toolbar.

11. Click the  **Run** button on the toolbar. Resize the columns to fit the data. Notice the column headings and the formatted numeric columns.

12. Click the  **Print Preview** button on the toolbar to preview the query results. Click the right mouse button, click **Page Setup...**, then click the **Page** tab and change the Orientation to Landscape. Click the **OK** button. Use the **Zoom** feature to view the data. Click the **Close** button on the toolbar.

13. Click the  **Close** button on the query window.

Exercise 13: Create a New Query (Multiple Criteria, Hidden Field, Column Headings and Formatting)

Scenario: Create a query of all owned buildings for Oak Ridge National Lab by Headquarters Program Office with gross square feet, building replacement plant value, and maintenance cost for FY2003.

1. Ensure the **Queries** tab is selected. Click the **New** button to access the New Query dialog box.
2. Double-click **Design View** to access the Show Table dialog box.
3. Double-click the **FIMS_TBL_PROPERTY** table.
4. Double-click the **FIMS_TBL_BUILDING** table.
5. Double-click the **FIMS_TBL_LU_PROGRAM_OFFICE** table.
6. Double-click the **FIMS_TBL_MAINT_HISTORY** table. Click the **Close** button.
7. Move and resize the tables so that the field names are in full view.
8. Notice the join lines between the Property and Building, Property and Program Office, and Property and Maintenance History tables have been created for you.
9. Select the following fields to include in the query:

PROG_LONG_DESC	**MHIS_FISCAL_YR**
PROP_PROPERTY_ID	**PROP_SITE_NUMBER**
PROP_NAME	**PROP_PROPERTY_TYPE**
PBLD_BUILDING_RPV	**PROP_OWNED_INGRANT**
PBLD_GROSS_SQFT	
MHIS_RM	
MHIS_AM	

10. Click in the Sort row cell below the **PROG_LONG_DESC** data field. Click the picklist button. Click on **Ascending** to sort the headquarters program office in ascending order.
11. Click in the Sort row cell below the **PROP_PROPERTY_ID** data field. Click the picklist button. Click on **Ascending** to sort the property id in ascending order.
12. Click in the **Show** box below the **MHIS_FISCAL_YR, PROP_SITE_NUMBER, PROP_PROPERTY_TYPE,** and **PROP_OWNED_INGRANT** data fields to hide the field contents in the generated query.
13. Click in the Criteria row cell below the **MHIS_FISCAL_YR** data field. Type **2003** to select maintenance cost for fiscal year 2003.
14. Click in the Criteria row cell below the **PROP_SITE_NUMBER** data field. Type **10004** to select records for the Oak Ridge National Lab site.
15. Click in the Criteria row cell below the **PROP_PROPERTY_TYPE** data field. Type **B** to select only building records.

16. Click in the Criteria row cell below the **PROP_OWNED_INGRANT** data field. Type **O** (capital letter O) to select records for DOE owned only.

17. Click the  **Run** button on the toolbar. Notice that Mhis_Fiscal_Yr, Prop_Site_Number, Prop_Property_Type, and Prop_Owned_Ingrant are not displayed on the output.

18. Click the  **Save** button on the toolbar. Type **ORNL OWNED BUILDINGS SQFT AND FY2003 MAINT** and click the **OK** button.

Add column headings and formatting

19. Click the  **Design View** button on the toolbar to return to the design grid to modify this query.

20. Click the **PROG_LONG_DESC** column (anywhere but the Show row). Click the  **Properties** button on the toolbar. In the Field Properties dialog box, type **HQ Program Office** in the Caption field. Don't close the Field Properties dialog box.

21. Click the next column **PROP_PROPERTY_ID**. In the Caption field, type **Prop ID**.

22. Click the next column **PROP_NAME**. In the Caption field, type **Prop Name**.

23. Click the next column **PBLD_BUILDING_RPV**. In the Caption field, type **Bldg RPV**. Click the Format field and then click the picklist arrow. Click **Currency**. Click the Decimal Places field and click the picklist arrow. Click **2**.

24. Click the next column **PBLD_GROSS_SQFT**. In the Caption field, type **Gross Sqft**. Click the Format field and then click the picklist arrow. Click **Standard**. Click the Decimal Places field and click the picklist arrow. Click **0** (zero).

25. Click the next column **MHIS_RM**. In the Caption field, type **Req Maint**. Click the Format field and then click the picklist arrow. Click **Currency**. Click the Decimal Places field and click the picklist arrow. Click **0** (zero).

26. Click the next column **MHIS_AM**. In the Caption field, type **Act Maint**. Click the Format field and then click the picklist arrow. Click **Currency**. Click the Decimal Places field and click the picklist arrow. Click **0** (zero).

27. Click the  Close button on the Field Properties dialog box. The remaining data fields selected in the query are not displayed in the output, the Show box has been checked off. Hence, no need to create column headings.

28. Click the  Save button on the toolbar.

29. Click the  **Run** button on the toolbar. Resize the columns to fit the data. Notice the column headings and the formatted numeric columns.

30. Click the  **Print Preview** button on the toolbar to preview the query results. Click the right mouse button, click **Page Setup...**, then click the **Page** tab and change the Orientation to Landscape. Click the **OK** button. Use the **Zoom** feature to view the data. Click the **Close** button on the toolbar.

31. Click the  **Close** button on the query window. Respond 'Yes' to save changes if prompted.

Using Totals

To perform math on the values in a column, such as counting the number of properties in an area, use the **Totals** function. Clicking the **Totals** button on the toolbar creates a **Total** row in the design grid. Access provides a group of predefined statistical functions, called aggregate functions, available in a picklist on the **Total** row.

Access has a number of aggregate function choices. Below is a list of four of the aggregate functions and their purposes that can be useful in retrieving FIMSWeb data:

Function Name	Description
GROUP BY	Limits the grouping/summarization to specific criteria.
SUM	Calculates a running sum of the data field in the column.
COUNT	Counts the occurrence of the data field in the column within the group by.
WHERE	Allows the data field to be used as selection criteria without having to be displayed in the query results. Turns off the **SHOW** box for the selected data field.

The easiest way to use **Totals** is to create a summary query. A summary query contains no detailed individual record information; it shows only the results of the calculations. To do this, create a query as you have been previously instructed and then select the  **Totals** button on the toolbar. A new row, labeled **Total**, appears in the design grid, with each column marked **Group By.**

Note: You can change back to a non-totals query by clicking again on the Totals button on the toolbar.

For each column in the **Total** row, Group By is the default aggregate function. To calculate a total for an individual column, select one of the aggregate functions for that column from the picklist. When you run the query, Access calculates the results and displays the output.

Exercise 14: Create a New Query (Sum)

Scenario: Create a query which will total deferred maintenance, required maintenance, and actual maintenance for all ORNL owned buildings for FY2002.

1. Ensure the **Queries** button is selected. Click the **New** button to access the New Query dialog box.

2. Double-click **Design View** to access the Add Table dialog box.

3. Double-click the **FIMS_TBL_SITE** table. Double-click the **FIMS_TBL_PROPERTY** table. Double-click the **FIMS_TBL_MAINT_HISTORY** table. Click the **Close** button.

4. Move and resize the **FIMS_TBL_SITE** table, the **FIMS_TBL_PROPERTY** table, and the **FIMS_TBL_MAINT_HISTORY** table so that the field names are in full view.

5. Select the following data fields from the **FIMS_TBL_SITE** table to include in the query: **SITE_NAME** and **SITE_NUMBER**.

6. Select the following data fields from the **FIMS_TBL_MAINT_HISTORY** table to include in the query: **MHIS_DM**, **MHIS_RM, MHIS_AM,** and **MHIS_FISCAL_YR**.

7. Select the **PROP_PROPERTY_TYPE** and **PROP_OWNED_INGRANT** fields from the **FIMS_TBL_PROPERTY** table to include in the query.

8. Click the  **Run** button on the toolbar. Note the number of records at the bottom of the datasheet window.

9. Click the  **Design View** button on the toolbar to return to the design grid to modify this query.

10. Click the  **Totals** button on the toolbar. A Total row is added to the design grid.

11. Click once on the Total row cell below the **SITE_NUMBER** data field. Click on the picklist button. Click on **Where** to use the site number as selection criteria for the query. Take note that the Show box is unchecked. Click in the Criteria row cell and type **10004**.

12. Click once on the Total row cell below the **MHIS_DM** data field. Click on the picklist button. Click on **Sum** to provide a sum of the deferred maintenance cost data field.

13. Click once on the Total row cell below the **MHIS_RM** data field. Click on the picklist button. Click on **Sum** to add the required maintenance costs together. Repeat for the **MHIS_AM** data field.

14. Click once on the Total row cell below the **MHIS_FISCAL_YR** data field. Click on the picklist button. Click on **Where** to use the maintenance history fiscal year as selection criteria for the query. Take note that the Show box is unchecked. Click in the Criteria row cell and type **2002**.

15. Click once on the Total row cell below the **PROP_PROPERTY_TYPE** data field. Click on the picklist button. Click on **Where** to use the property type as selection criteria for the query. Take note that the Show box is unchecked. Click in the Criteria row cell and type **B**.

16. Click once on the Total row cell below the **PROP_OWNED_INGRANT** data field. Click on the picklist button. Click on **Where** to use the owned ingrant indicator as selection criteria for the query. Take note that the Show box is unchecked. Click in the Criteria row cell and type **O** (capital letter O).

17. Click the  **Save** button on the toolbar. Type **ORNL MAINTENANCE FOR FY2002** and click the **OK** button.

18. Click the  **Run** button on the toolbar. Note the number of records. There is one summary record for the site. The individual FY2002 deferred maintenance cost, required maintenance cost, and actual maintenance cost were grouped and summed by site.

Add column headings and formatting

19. Click the  **Design View** button on the toolbar to return to the design grid to modify this query.

20. Click the **SITE_NAME** column (anywhere but the Show row). Click the  **Properties** button on the toolbar. In the Field Properties dialog box, type **Site** in the Caption field. Don't close the Field Properties dialog box.

21. Click the **MHIS_DM** column. In the Caption field, type **Deferred Maint**. Click the Format field and then click the picklist arrow. Click **Currency**. Click the Decimal Places field and click the picklist arrow. Click **0** (zero).

22. Click the **MHIS_RM** column. In the Caption field, type **Req Maint**. Click the Format field and then click the picklist arrow. Click **Currency**. Click the Decimal Places field and click the picklist arrow. Click **0** (zero).

23. Click the next column **MHIS_AM**. In the Caption field, type **Act Maint**. Click the Format field and then click the picklist arrow. Click **Currency**. Click the Decimal Places field and click the picklist arrow. Click **0** (zero).

24. Click the  Close button on the Field Properties dialog box. The remaining data fields selected in the query are not displayed in the output, the Show box has been checked off. Hence, no need to create column headings.

25. Click the  Save button on the toolbar.

26. Click the  **Run** button on the toolbar. Notice the column headings and the formatted numeric columns. You may need to resize some of the columns to display all of the data.

Change query to run for excessed buildings only

27. Click the  **Design View** button on the toolbar to return to the design grid to modify this query.

28. From the File menu, click **File, Save As…**. Add **– for excessed buildings** to the end of the displayed query name. Click the **OK** button.

29. Add a new data field to the query. Double-click the **PROP_EXCESS_IND** field from the **FIMS_TBL_PROPERTY** table.

30. Click once on the Total row cell below the **PROP_EXCESS_IND** data field. Click on the picklist button. Click on **Where** to use the property excess indicator as selection criteria for the query. Take note that the Show box is unchecked. Click in the Criteria row cell and type **Y**.

31. Click the  Save button on the toolbar.

32. Click the  **Run** button on the toolbar. The individual FY2002 deferred maintenance cost, required maintenance cost, and actual maintenance cost for excessed buildings were grouped and summed by site.

33. Click the  **Print Preview** button on the toolbar to preview the query results. Take notice that the query title reflects the change to the query name for excessed buildings.

34. Click the  **Close** button on the query window.

Using A Query Wizard

A Wizard is an Access term for "a tool that asks you questions and creates an object based on your answers." Access has a Wizard that will create a simple select query using one or more tables or queries, letting you choose the specific data fields you desire. You may wish to use this Wizard to build your basic query and then edit the query in design mode to further enhance it.

To create a simple select query using a Wizard perform the following:

1. In the Database window, click the **Queries** tab. Click the **New** button and double-click the **Simple Query Wizard** in the New Query dialog box.
2. The first dialog box asks "Which fields do you want in your query?" Select a table or query from the **Tables/Queries:** list.
3. Double-click the desired data fields from the **Available Fields:** list to move them to the **Selected Fields:** list.
4. Select another table or query from the **Tables/Queries**: list to use more than one table for your query and then select the data fields. Once you have selected all your desired data fields for your query, click the **Next >** button to continue.
5. Depending on the data fields you selected, you may be prompted to create a Detail or Summary query? A Detail query will display every line of data retrieved on your query output. A Summary query will summarize/combine like data as you specify and display these summarized lines on your query output. For example, if you wanted gross square footage by site, you would want a summary report summing the gross square footage with one total per site. A detail report would give you a line for each property within the site and its associated gross square footage.

   Select either the **Detail** or **Summary** radio button.
6. If you choose Summary, click the **Summary Options...** button. Data fields for your query that may be summarized are displayed and you need to determine how you want them summarized. You may sum, average, or select the minimum or maximum value for the data fields listed. You may also obtain a count which is indicated by a check box. Click the check box if you desire to include the count on your query output. Click the **OK** button.
7. Click the **Next >** button.
8. The last window asks for a title for you query. Just type over the default title. You may then choose to run the query by selecting the **Open the query to view information** radio button or work with the query in the design grid by selecting the **Modify the query design** radio button. Click the **Finish** button to complete the Query Wizard dialog.

The Query Wizard will create a query based on the information you supplied it. In Design view you can modify the query further by adding another table, sorting, or adding selection criteria. Don't forget to save and name the query.

Save the Query Output to Other Formats

The output of a query may be saved in several formats, including Microsoft Excel spreadsheet, Text File, and Rich Text Format (.rtf). The output files created can be opened in Microsoft Excel, Windows Notepad and a word processor such as Microsoft Word respectively. The query itself can also be copied to another Access database.

To save the query to another format perform the following:

1. Select **File, Export...** in Datasheet or Design view.
2. From the Export Query '*queryname*' To... dialog box, select the desired output format from the **Save as type:** picklist. Modify the **File name:** field as appropriate and take notice of the folder the file is being placed in so that you can locate it later. Click the **Save** button to save the query output to the designated file format.

Exercise 15: Save Query Output to Microsoft Excel

Scenario: Run an existing query and save the output to Microsoft Excel for further formatting.

1. Click the **ORNL OWNED BUILDINGS SQFT AND FY2003 MAINT** query from the database window.
2. Click the **Open** button from the database window. The query will run and the data will be displayed in the Datasheet view.
3. Click **File, Export…** from the File menu.
4. In the "Export Query…" dialog box, change the **Save as type:** to **Microsoft Excel 97-2000 (*.xls)**.
5. Click the **Save formatted** check box to ✓ it.
6. Change the **File Name** if desired and notice/change the **Save in:** location where the file will be saved.
7. Click the  **Save All** button.
8. Click the  **Close** button on the query window.
9. The file can then be opened in Excel.

17. Creating Reports

The Access report option is used to view and print database information. Although you can print database records in a table or query, a report provides more precise control over how the information is printed. Reports can be customized to include page headers and calculated totals.

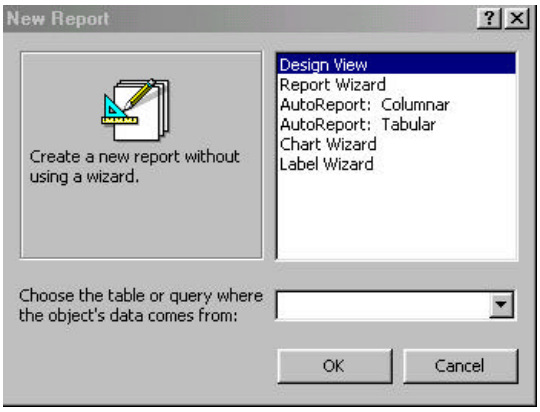
Creating a Report with a Wizard

As we mentioned before, a Wizard is an Access term for "a tool that asks you questions and creates an object based on your answers." Access has wizards for every object -- tables, forms, queries, and reports. We will use the Report Wizard to create report layouts that can be further customized in Design view. The Report Wizard questions you about your requirements and then builds the report based on your responses.

The Report Wizard is started through the New Report dialog box. Display the dialog box using the following method:

1. 

From the Database window, click the **Reports** button and then click the **New** button.



2. To use a Wizard, just simply select one from the list and specify a table or query where the data resides for the report.

The following table provides a brief description of the Wizards we will use.

Report Wizard Types	
AutoReport:Columnar AutoReport: Tabular	Creates a single-column or tabular (spreadsheet like) report of a query or table without asking any further questions. This is the quickest way to generate a report.
Report Wizard	Creates a report with detail and/or summary lines. Allows you to group information such as grouping all sites within a field office. This Wizard allows you to specify data fields, sort order, and a custom layout and title.

AutoReports - Columnar or Tabular

The fastest way to create a report is by using the AutoReport wizard which creates a complete report from a selected table or query without displaying any dialog boxes or requiring any input.

To create an AutoReport:

1. Click the **Reports** tab on the Database window. Click the **New** button.
2. Select either **AutoReport: Columnar** or **AutoReport: Tabular** from the New Report dialog box
3. Select a query or table from the list. Click the **OK** button.
4. Select **File, Save As…** from the File menu. Enter a report name and click the **OK** button. Click the **Close** button on the toolbar to view the report in Design view. Click the  **Close** button on the report window to close the report and return to the Database window.

Example: Create an AutoReport of a Query using the Wizard

Scenario: Create a tabular report of the ORNL MAINTENANCE FOR FY2002 query.

1. Click the **Reports** tab on the Database window. Click the **New** button.

2. From the New Report dialog box, select the **AutoReport: Tabular**. From the table/query dropdown list select the **ORNL MAINTENANCE FOR FY2002** query and click the **OK** button. Wait for the report to generate and appear on the screen.

3. Click the **Close** button on the toolbar and view the report layout in Design view. Click the **Save** button on the toolbar. Type **ORNL MAINTENANCE FOR FY2002** in the Report Name field and click the **OK** button.

4. Click the  **Close** button on the report window to close the report.

The Report Wizard

The Report Wizard feature gives you many options when creating a report.

One of the options the Report Wizard features is grouping levels. Grouping levels allows you to sort and place like items together, such as grouping data by site or area within site. The repetitive printing of like data is suppressed by grouping. It also allows for the calculation of subtotals within a report.

Another option that the Report Wizard offers for your report format is summary versus detail report lines. A detail report displays one report line per record extracted from the database. A summary report displays one report line per grouping level, summarizing the data extracted from the database. The Report Wizard also allows you to have both detail and summary report lines. You will also have to keep in mind when choosing summary report lines that the data fields that you have selected for your report allow summarization. For example, numeric fields can be summed and reported in a summary report line. On the other hand, Property ID is a unique record identifier and does not provide summarization characteristics.

To create a report using the Report Wizard:

1. Click the **Reports** button on the Database window.
2. Double-click the **Create report by using wizard** from the Database window.
3. The Report Wizard dialog box asks "Which fields do you want on your report?" Select a table or query from the **Tables/Queries:** list.
4. Double-click the desired fields from the **Available Fields:** list to move them to the **Selected Fields**: list.
5. Repeat steps 4 and 5 to select additional data for your query. Once you have selected all your desired data fields for your query, click the **Next >** button to continue.
6. The Report Wizard dialog box asks "Do you want to add any grouping levels?" Grouping allows you to sort and break at identified intervals such as site number. If you want a detail report, don't choose any grouping levels. To choose grouping levels, double-click the data fields that you want to group by.

   Click the **Grouping Options...** button to specify the grouping intervals to use such as **Normal** which refers to using the whole data field for comparisons. Make the appropriate selections. Click the **OK** button.

   Click the **Next >** button.
7. The Report Wizard dialog box then asks which data fields you want to sort on. Select the data field(s) you want to sort on from the dropdown list and choose either  Ascending or  Descending sort order.

   If you chose data fields that may be summarized, such as gross square footage that can be summed for a site, a Summary Options... button will be visible. Click the **Summary Options...** button and select the summary values that you would like calculated. You may sum, average, or select the minimum or

maximum value for the data fields listed. You can choose to show **Detail and Summary** records on your report or just **Summary Only** records. You may also choose to **Calculate percent of totals for sums** by click the check box. Click the **OK** button after you have made all your selections.

Click the **Next >** button.

8. The Report Wizard dialog box asks "How would you like to lay out your report?" Make your choices from the various options and click the **Next >** button.
9. The Report Wizard dialog box asks “What style would you like?” Choose a format style for your report and click the Next > button.
10. The final Report Wizard dialog box asks for a title for your report. Type over the default title to change it. You may then choose to see the report by selecting the **Preview the report** radio button or work with the report in the Design view by selecting the **Modify the report’s design** radio button. Click the **Finish** button to complete the Report Wizard dialog.

Example: Create a Detail Report

Scenario: Create a detail report of building usage information.

1. Click the **Reports** button.

2. Double-click the **Create report by using wizard** from the Database window.

3. Select the **BUILDING USAGE INFORMATION** query from the **Tables/Queries:** picklist.

   Click the >> button to select all the data fields for the report. Notice all the Available Fields: are moved to the Selected Fields: list. Click the **Next >** button.

4. To create a detail report, we don't want to select any grouping levels, so just click the **Next >** button.

5. From the dropdown list select and sort the **PROP_SITE_NUMBER** data field in ascending order. Repeat in the second sort list for **PROP_PROPERTY_ID**. Click the **Next >** button.

6. Select the **Tabular** layout option. Choose **Landscape** as the Orientation. Click the **Next >** button.

7. View the various report styles and select one. Click the **Next >** button.

8. Accept the default title for your report and click the radio button to **Preview the report**. Click the **Finish** button. Wait for the report to generate and appear in Print Preview format.

9. Notice the detail lines of the report by property id. Click the  **Close** button on the Preview window to close the report. Notice the report has been saved and is now listed under the Reports list of the Database window.

Exercise 16: Create a Detail/Summary Report

Scenario: Create a report of ORNL owned buildings and sum the gross square feet, building RPV, FY2003 required maintenance, and FY2003 actual maintenance by HQ program.

1. Click the **Reports** button.

2. Double-click the **Create report by using wizard** from the Database window.

3. Select the **ORNL OWNED BUILDINGS SQFT AND FY2003 MAINT** query from the **Tables/Queries:** picklist.

   Click the >> button to select all the data fields for the report. Notice all the Available Fields: are moved to the Selected Fields: list. Click the **Next >** button.

4. Double-click the **PROG_LONG_DESC** data field to add as a grouping level.

   Click the **Next >** button.

5. From the dropdown list select and sort the **PROP_PROPERTY_ID** data field in ascending order.

   Click the **Summary Options...** button. Calculate the Sum of the **PBLD_BUILDING_RPV, PBLD_GROSS_SQFT, MHIS_RM,** and **MHIS_AM** by clicking the **Sum** check box. Click the **Detail and Summary** radio button to display detail and summary lines on your report. Click the **OK** button.

   Click the **Next >** button.

6. View the various layouts for the report and choose **Stepped** by clicking the Layout radio buttons. Choose **Landscape** as the Orientation. Click the **Next >** button.

7. View the various report styles and select **Formal**. Click the **Next >** button.

8. Accept the default title for your report and click the radio button to **Preview the report**. Click the **Finish** button. Wait for the report to generate and appear in Print Preview format.

9. Notice the detail lines of the report by property id and the Sum and Grand Total summary lines of building rpv, gross square feet, required maintenance, and actual maintenance. Click the **Close** button on the Preview window to close the report.

Example: Create a Summary Report

Scenario: Create a report of buildings and their square footage and Replacement Plant Value (RPV) by site and HQ Program.

1. Click the **Reports** button.

2. Double-click the **Create report by using wizard** from the Database window.

3. Select the **ORNL OWNED BUILDINGS SQFT and FY2003 MAINT** query from the **Tables/Queries:** picklist.

   Double-click the following data fields in the **Available fields:** list to move them to the **Selected Fields:** list:

   PROG_LONG_DESC
   PBLD_BUILDING_RPV
   PBLD_GROSS_SQFT

   Click the **Next >** button.

4. Double-click the **PROG_LONG_DESC** data field to add as a grouping level. Click the **Next >** button.

5. The report will be sorted by the grouping item, HQ Program Description. There will be no additional items to sort on.

   Click the **Summary Options...** button. Calculate the Sum of the **PBLD_BUILDING_RPV** and **PBLD_GROSS_SQFT** by clicking the **Sum** check box. Click the **Summary Only** radio button to display only summary lines on your report. Click the **OK** button.

   Click the **Next >** button.

6. Choose a layout for the report by clicking a Layout radio button. Choose **Portrait** as the Orientation. Click the **Next >** button.

7. Select a style for your report. Click the **Next >** button.

8. Title your report **RPV AND GROSS SQFT BY HQ PROGRAM OFFICE** by typing over the default report title. Click the radio button to **Preview the report**. Click the **Finish** button. Wait for the report to generate and appear in Print Preview format.

9. Notice the report has no detail lines. The report consists of summary data for each HQ Program Office with totals and a report Grand Total. Click the **Close** button on the Preview window to close the report.

Viewing Reports through Print Preview

Print Preview displays the report as it will actually appear when printed. Use this view to check the report for content as well as format.

You were viewing the reports in the previous exercises through the Print Preview feature. Print Preview can display the full page or zoom into selected portions to see the actual page contents. The report Print Preview functions the same as the Print Preview used to display queries in the previous section.

Printing Reports

To print a report, click the  **Print** button on the toolbar.

To customize the report further, while in Print Preview click the right mouse button and then click **Page Setup...**. The Page Setup dialog box allows you to change the margins of your printed report, the page orientation, and layout options for columns.

Saving a Report

When you save a report only the report design is saved, not the report itself.

You cannot save a report with the same name as a table. For the first report, Access will suggest the default name **REPORT1**. If you accept the default, Access will increment the number for additional reports. You should however consider assigning a more meaningful name.

To save a report:

1. In Design View, click the  **Save** button on the toolbar.
2. If prompted, type a Report name and click the **OK** button.

To close the Report window:

1. Click the  **Close** button on the Report window.
2. If you are prompted to save, select **Yes** or **No**, as appropriate. If prompted, type a report name to save the report.

Deleting a Report

Saved reports which are no longer needed should be deleted.

To delete a report:

1. Click the **Reports** button in the Database window.
2. Click the report name in the Database window.
3. Click the right mouse button and click **Delete**. Click **Yes** to confirm the delete.

THIS PAGE INTENTIONALLY LEFT BLANK.

Appendix A

Additional Microsoft ACCESS Resource Information

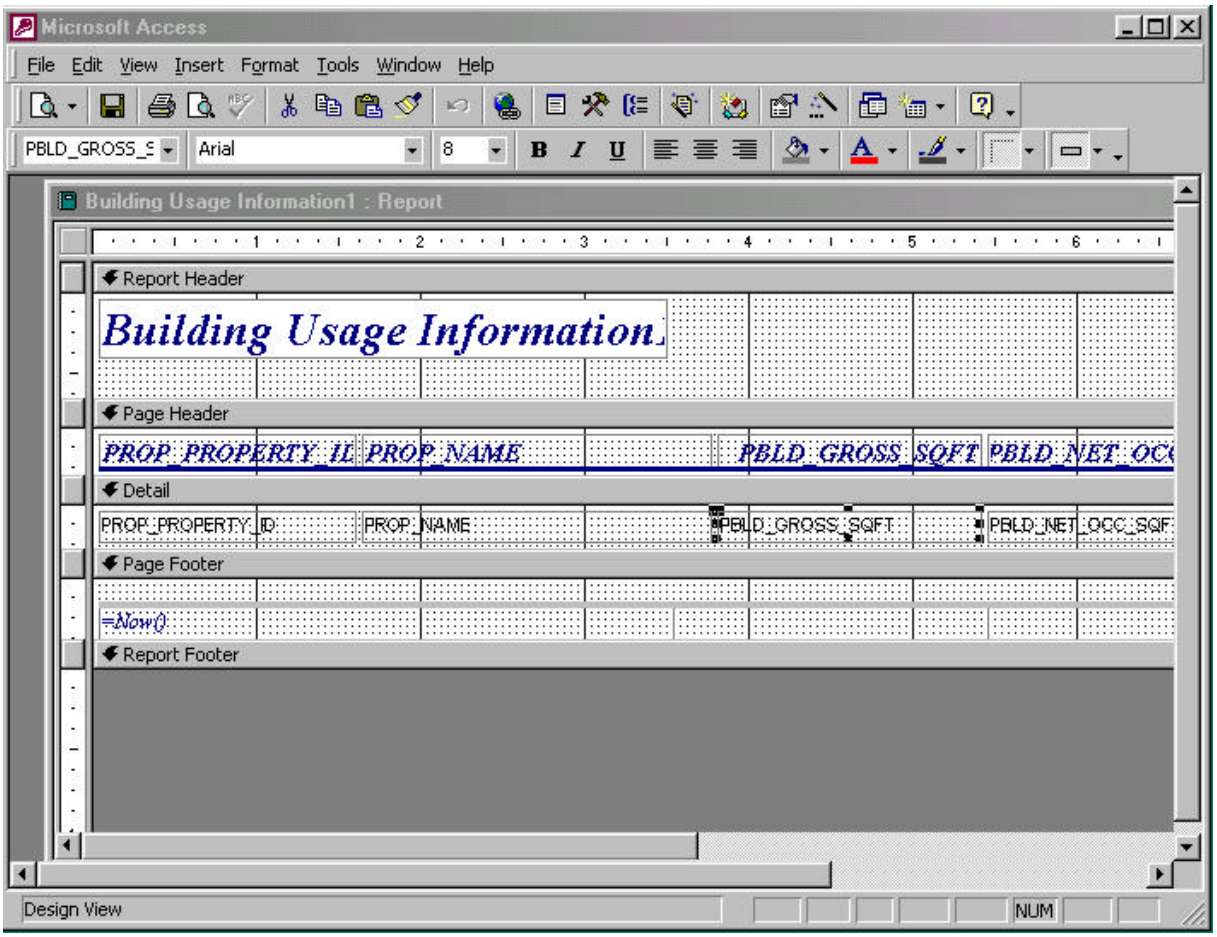
Editing the Report Layout

Once you have saved a report, you can open it in Design view from the Database window by selecting the report from the list and clicking the **Design** button. If you are viewing the report in Print Preview, click the **Close** button on the toolbar to get to Design view. Design view allows you to:

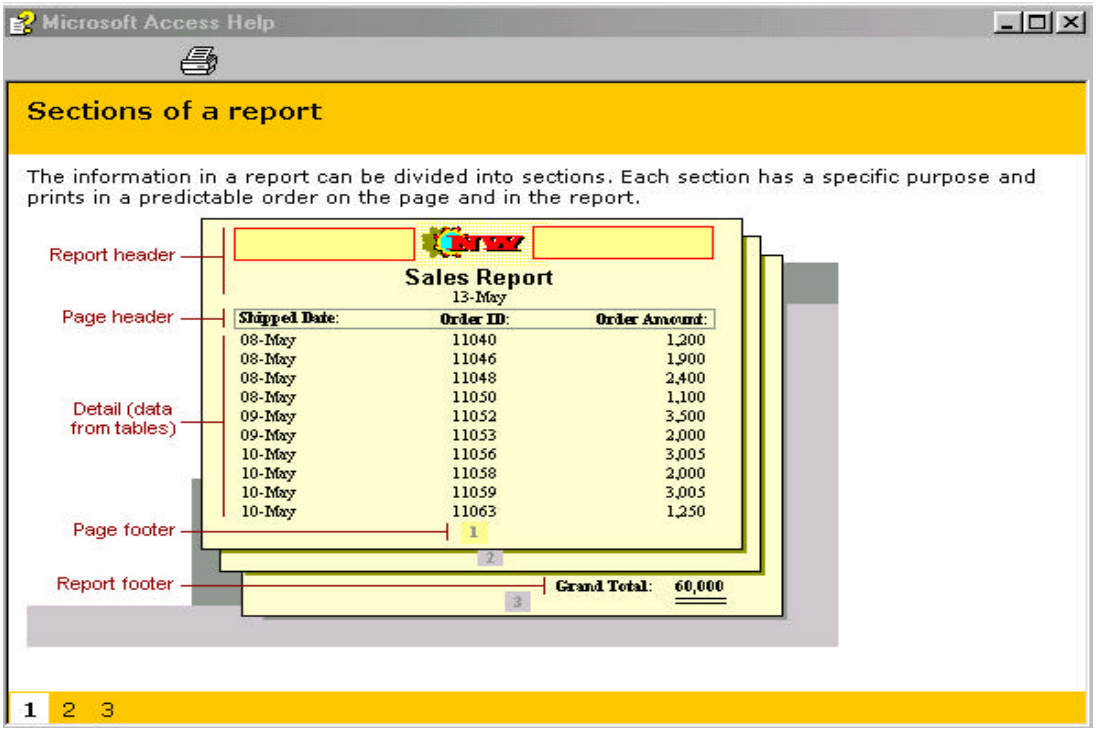
- Change field names to English names
- Change fonts for labels and text fields
- Resize and move fields

Design View

In Design view, you may edit the contents, appearance, and properties of the report and report elements. You can display a toolbox for adding text, combo and list boxes, buttons, calculated fields, line drawings, and other elements. The buttons displayed in the toolbar will depend on which portion or element of the report is selected.


Microsoft Access
File Edit View Insert Format Tools Window Help
PBLD_GROSS_S
Arial
8
Building Usage Information1 : Report
Report Header
Building Usage Information
Page Header
PROP_PROPERTY_ID
PROP_NAME
PBLD_GROSS_SQFT
PBLD_NET_OCC_SQF
Detail
PROP_PROPERTY_ID
PROP_NAME
PBLD_GROSS_SQFT
PBLD_NET_OCC_SQF
Page Footer
=Now()
Report Footer
Design View
NUM

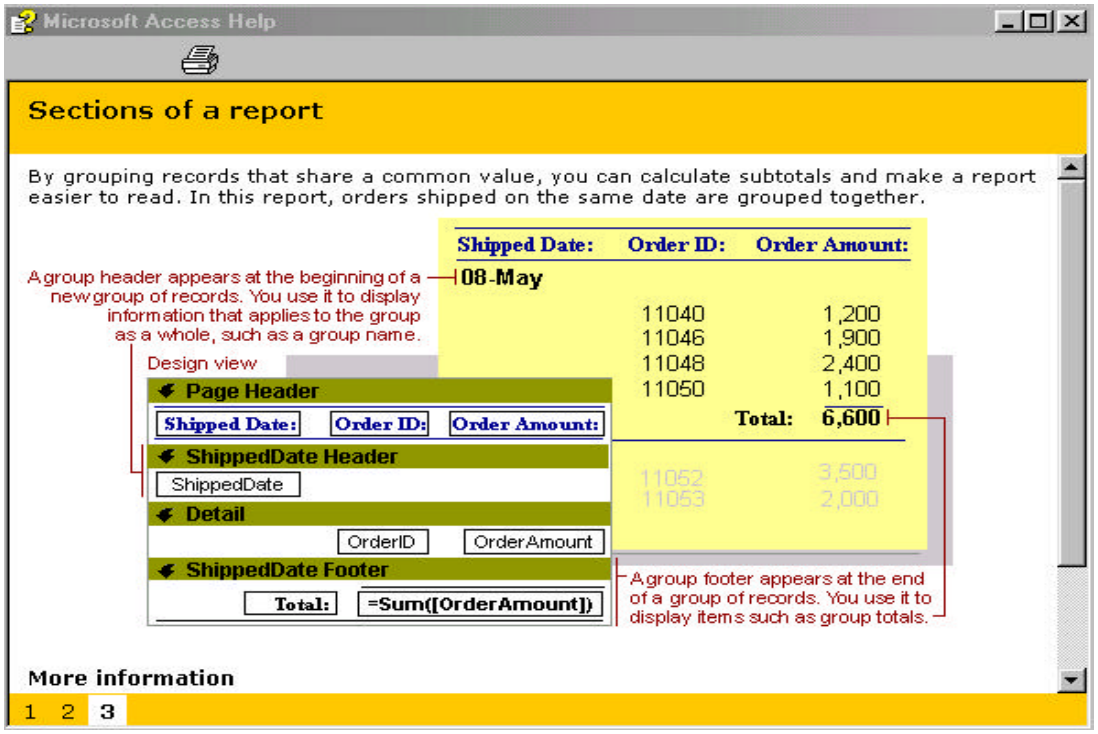
The following identifies sections of a report in Design view as shown in Access Help.



All reports have five sections, each of which is described below:

Section	Purpose
Report header	This section appears at the top of the first page of the report.
Page header	This section appears at the top of each page.
Detail	Contains the body of the report with the data field labels and data field values.
Page footer	This section appears at the bottom of each report page.
Report footer	This section appears at the end of the report.

If you choose grouping levels for a report, the Design view will also contain group header and footer sections. A pair of these sections will be present for each data field that you group by. The following represents the group header and footer sections of a report as shown in Access Help.



Identifying Design Tools

You have several tools available in Design view for working with reports.

Toolbar	A row of buttons below the File menu. Gives you quick access to design tasks such as changing fonts, centering, and aligning.
Ruler	Ruled lines along the left and top edge of the report window. Helps to place items and to size sections of the report.
Toolbox	A window containing a series of buttons for customizing and adding report objects. If the toolbox window is closed, you can restore it by clicking **View** from the File menu. Click **Toolbars** and then click **Toolbox**.
Status Bar	An area at the bottom of the screen that displays messages.

Selecting Elements

Before you can make any changes to the existing objects such as the title, labels, or data fields on your report, you must select an object. You do this by clicking on the object to be modified.

The Access Report Wizard creates the data fields and labels that appear in Design view. The data field represents the placement of database data on the report. The label is a description identifying the data field to the user.

Select an object by clicking on it. When the object is selected, it is surrounded by sizing handles. The handle in the upper left corner is larger than the other handles. This larger handle is used to move and position the object on the report.

Select a group of objects in a row or in a column by using the horizontal or vertical ruler in Design view. Clicking the horizontal ruler above a column of objects to selects the whole column. A row of objects can be selected by clicking the vertical ruler left of the row.

Select multiple objects by pressing the [Shift] key and clicking each object.

Using the Ruler

The ruler is used to help resize and move objects on a report in Design view. If an object is selected, click and drag it to move. The horizontal and vertical rulers display black shading representing the height and width of the element and its current position, to help place the object more exactly.

Resizing Fields

To change the size of a selected object, point to one of the smaller sizing handles. When the pointer appears as a two-headed arrow, drag a side handle to change the width, a top or bottom handle to change the height, or a corner handle to change both the height and the width of the object.

Note: If multiple objects have been selected, dragging a handle on one of the objects will change the size of all of them.

You may wish to change the size of an object to change the amount of information that can be displayed. Changing the size of a field does not change the size of the characters within the field. To change the size of characters, you must change the font or point size settings on the toolbar.

Moving Fields

Objects can be moved to any location on your report. To move a selected object, click the object and move the mouse pointer over the object until the pointer becomes an open hand. Then click and drag the object as desired.

If multiple objects are selected, clicking and dragging one will move them all.

Deleting Fields

You may decide that a report object is not wanted. To delete an object, select it and press **[Delete]**.

Note: If multiple objects are selected, pressing [Delete] will delete them all.

Changing Fields and Labels

There are several ways to change the text of a label, the contents of a field, or a header or footer.

The easiest way is to edit the text in the object. Select the object and then *click it a second time*. Access will place an insertion point (I bar) in the text. Edit the text as you would any textbox.

Note: If you click twice too fast, Access will treat it as a double-click and display the Properties window. If this occurs, click the Close button on the Properties window.

To change the data field displayed in an object:

1. Click the object to select it.
2. Click the **Properties** button on the toolbar.
3. Click the **All** tab. The **Control Source** provides you with a picklist of data fields to select for your report. Select a new data field from the picklist.

   Take notice that just like the Query Properties dialog box, you can specify a Format, Decimal Places, and various other attributes for the data field being displayed on your report.
4. Click the **Close** button on the dialog box to close it.

Example: Edit the Design of a Report

Scenario: For the ORNL OWNED BUILDINGS SQFT AND FY2003 MAINT report, move the report title, resize the columns, and format the numeric columns.

1. Click the **Reports** button in the database window. Click on the **ORNL OWNED BUILDINGS SQFT AND FY2003 MAINT** report and click the **Design** button.

Move report title to Page Header section to print on every page of report

2. Place the cursor at the bottom border of the Page Headers section until the cursor changes to a two-headed arrow. Click and drag the bottom border of the Page Header section down to enlarge the section so that the report title from the Report Header section can be moved into it.

3. In the left hand ruler of the Page Header section, click and drag down through the ruler area next to the column headings. This will select all the column heading objects at once.

4. Position the cursor over the selected column heading objects until the cursor changes to the open hand, then click and drag the objects down to the bottom border of the Page Header section.

5. In the left hand ruler of the Report Header section, click and drag down through the ruler area next to the report title to select all the objects at once.

6. Click and drag the report title objects (same procedure as step 4) into the Page Header section.

7. Click and drag the bottom border of the Report Header section up to the top border of the selection to close it up.

8. Click the **Save** button on the toolbar to save your changes thus far.

Change a Column Heading

9. In the Page Header section, click the **PROG_LONG_DESC** object. Click one again inside the object to edit the text. Replace the PROG_LONG_DESC text with **HQ Program**.

10. Click the **Save** button on the toolbar to save your changes thus far.

Adjust Object Width

11. To increase the width of the HQ Program data field, click the **PROG_LONG_DESC** object in the Prog_Long_Desc Header section. Move the cursor to the right side of the box until the cursor appears as a two-headed arrow, click and drag the right side of the box to make the object larger.

12. To increate the width of the Prop Name and Bldg RPV data fields, the Gross Sqft, Req Maint and Act Maint data fields must be moved to the right along with their respective column headings and totals. The objects will be selected as a block and then moved.

    In the ruler at the top of the window, click and drag from the **Bldg RPV** object over to the **Act Maint** object. You will notice that a variety of objects have been selected.

Additional items were selected that we don't want to move, so we need to deselect them. Deselect the report title by pressing the [Shift] key and then click the report title object. Repeat for the 3 horizontal lines by pressing the **[Shift]** key and then click each of the horizontal lines. Notice that the sizing handles around the deselected objects have been removed.

Press the **[Shift]** key and click the page number object in the Page Footer section to deselect it also.

Now, position the cursor over one of the selected objects until the cursor changes to the  open hand, then click and drag the objects to the right about 1 inch. Ensure that that cursor has changed to the open hand, or you will deselect all the object and have to select them all over again.

13. Click the **Property Name** object in the Page Header section and then **[Shift]** and click the **PROP_NAME** object in the Detail section. Move the cursor to the right side of the box around one of the objects until the cursor appears as a two-headed arrow, then click and drag the object to the right towards the **Bldg RPV** object to enlarge it.. Notice both objects move together.

14. Click the **Bldg RPV** object in the Page Header section and then **[Shift]** and click the **PBLD_BUILDING_RPV** object in the Detail section. Repeat the **[Shift]** and click for the **=sum([PBLD_BUILDING_RPV])** object in the Prog_Long_Desc footer and the Report footer. Move the cursor to the left side of the box around one of the objects until the cursor appears as a two-headed arrow, then click and drag the object to the left towards the **PROP NAME** object to enlarge it. Notice all four objects move together.

View and Save the Results

15. Click the  **Save** button on the toolbar to save the report layout changes.

16. Click the  **Print Preview** button on the toolbar to view the report. Click anywhere in the report to display it in full page view. Click the  **Close** button on the preview window to return to the Database window.

Importing Queries and/or Reports from another Microsoft Access Database

If you have developed queries and/or reports in another FIMS Microsoft Access database or any other Microsoft Access database that has similar tables, you may import the queries and/or reports into your **FIMSWeb** database. The Import utility will create a copy of the queries and/or reports in the **FIMSWeb** database, but will not remove them from the source database.

To **Import** a query and/or report from another Microsoft Access database into your **FIMSWeb** database:

1. Open the **FIMSWeb.mdb** database.
2. Select **File, Get External Data, Import**.
3. In the Import dialog box ensure that **Microsoft Access (*.mdb;…)** is selected in the **Files of type:** box. Locate the Microsoft Access database with the report/query that you wish to import and double-click the database name.
4. From the Import Objects dialog box, click the **Queries** tab and click the query(s) you want to import. You may also at the same time, click the **Reports** tab and click the report(s) you want to import. Click the **OK** button.

The report/query has now been copied to your FIMSWeb database. You can Preview it from the Database window or open it in Design mode and make modifications.

Importing a Table from another Microsoft Access Database

In the previous section we copied a query and report from one Microsoft Access database into another Microsoft Access database. This same process can be used to copy a database table from one Microsoft Access database into another Microsoft Access database. The Import utility allows us to copy a database table and move it to another database. In essence we have taken a snap shot of the database table at a given time, because if the original table is updated, the imported table does not change.

If you have other Microsoft Access database tables that store additional site specific facility data, you may want to import them into your FIMSWeb database. Then you will be able to produce reports from the FIMSWeb data and the site specific data as long as there is a matching data field, such as Property ID, to join the tables together.

To **Import** a database table from a Microsoft Access database into your **FIMSWeb** database:

1. Open the **FIMSWeb.mdb** database.
2. Select **File, Get External Data, Import**.
3. In the Import dialog box ensure that **Microsoft Access (*.mdb;...)** is selected in the **Files of type:** box. Locate the Microsoft Access database with the table that you wish to import and double-click the database name.

4. From the Import Objects dialog box, click the **Tables** tab. Click each table that you want to import. Click the **OK** button to import the table into your FIMSWeb database.

Linking a Table from another Microsoft Access Database

The Link utility, unlike the Import utility, allows you to create a "link" between two databases allowing one table to be shared by both. By using the Link utility, if the table in one database is updated, the results are reflected in the linked table in the other database.

To **Link** a database table from a Microsoft Access database into your **FIMSWeb** database:

1. Open the **FIMSWeb.mdb** database.
2. Select **File, Get External Data, Link Tables**.
3. In the Link dialog box ensure that **Microsoft Access (*.mdb;...)** is selected in the **Files of type:** box. Locate the Microsoft Access database with the table that you wish to link and double-click the database name.
4. From the Link Tables dialog box, click each table that you want to link. Click the **OK** button to create a link to that table in your FIMSWeb database.

Refreshing Links to a Table

You may wish to refresh the link to a table if the design/structure of the table changes. That is if additional data fields are added or the size of a data field changes. The Access Linked Table Manger allows you to refresh your table links.

To refresh links to a linked table:

1. Open the **FIMSWeb.mdb** database or the database with the linked table that you want to refresh.
2. From the File menu click **Tools**, click **Database Utilities**, and then click **Linked Table Manager**.
3. Select the check box for the tables whose links you want to refresh. Click the **OK** button.
4. If you are refreshing the Links to the FIMSWeb tables, you will be prompted to enter **User Name** and **Password** in the Oracle dialog box. Type **guest** for both prompts. Click the **OK** button.
5. Click the **OK** button to acknowledge that the table links were successfully refreshed.
6. Click the  **Close** button on the Linked Table Manager dialog box to close the link utility.